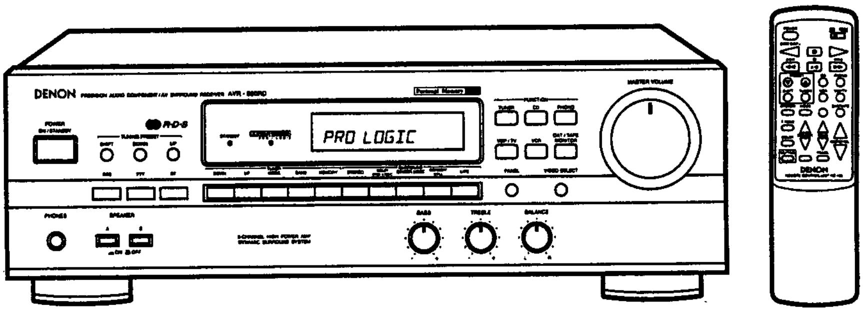
DENON

Hi-Fi AV Surround Receiver

SERVICE MANUAL

MODEL AVR-950RD

AV SURROUND RECEIVER



For servicing, refer to the service manual of AVR-900 already issued at the same time. This service manual is common to AVR-900 including operating instruction, exploded view, printed wiring board, schematic diagram etc. Also, it is mentioned to only difference for parts list of P.W. Board.

CONTENTS

OPERATING INSTRUCTIONS .... 2~10
PARTS LIST OF P. W. BOARD 11, 12
PRINTED WIRING BOARD .... 13~17
EXPLODED VIEW 18
PARTS LIST OF EXPLODED VIEW 19
SCHEMATIC DIAGRAM .... 21~25

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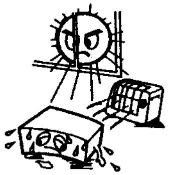
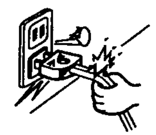
1 INTRODUCTION/ELNFÜHRUNG/INTRODUCTION/INTRODUCCIÓN/INLEIDING/INLEDNING

NOTE ON USE/HINWEISE ZUM GEBRAUCH OBSERVATIONS RELATIVES A L'UTILISATION/NOTE SULL'USO NOTAS SOBRE EL USO/ALVORENS TE GEBRUIKEN/OBSERVERA OBSERVAÇÕES QUANTO AO USO

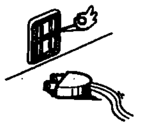


- Avoid high temperatures
  Allow for sufficient heat dispersion when installed on a rack.
- Vermeiden Sie hohe Temperaturen
  Beachten Sie, daß eine ausreichend Luftzirkulation gewährleistet wird, wenn das Gerät auf ein Regal gestellt wird.
- Eviter des températures élevées
  Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.
- Evitate di esporre l'unità a temperature alte.
  Assicuratevi che ci sia un'adeguata dispersione del calore quando installate l'unità in un mobile per componenti audio.
- Evite altas temperaturas
  Permite la suficiente dispersión del calor cuando está instalado en la console
- Vermijd hoge temperaturen
  Zorg voor een degelijk hitteafvoer indien het apparaat op een rek wordt geplaatst.
- Undvik höga temperaturer.
  Se till att det finns möjlighet till god värmeavledning vid montering i ett rack.
- Evite temperaturas altas
  Conceda suficiente dispersão de calor quando o equipamento for instalado numa prateleira.

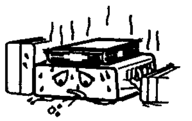


- Handle the power cord carefully.
  Hold the plug when unplugging the cord
- Gehen Sie vorsichtig mit dem Netzkabel um.
  Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausziehen.
- Manipuler le cordon d'alimentation avec précaution.
  Tenir la prise lors du débranchement du cordon.
- Manneggiate il filo di alimentazione con cura.
  Agite per la spina quando scollegate il cavo dalla presa.
- Maneje el cordón de energía con cuidado.
  Sostenga el enchufe cuando desconecte el cordón de energía.
- Hanteer het netsnoer voorzichtig
  Houd het snoer bij de stekker vast wanneer deze moet worden aan- of losgekoppeld.
- Hantera nätkabeln varsamt.
  Håll i kabeln när den kopplas från el-uttaget.
- Manuseie com cuidado o fio condutor de energia
  Segure a tomada ao desconectar o fio

- Keep the set free from moisture, water, and dust.
- Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern.
- Protéger l'appareil contre l'humidité, l'eau et la poussière.
- Tenete l'unità lontana dall'umidità, dall'acqua e dalla polvere.
- Mantenga el equipo libre de humedad, agua y polvo
- Laat geen vochtigheid, water of stof in het apparaat binnendringen.
- Utsätt inte apparaten för fukt, vatten och damm
- Mantenha o aparelho livre de qualquer umidade, água ou poeira.

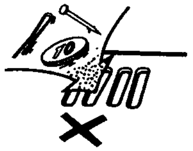


- Unplug the power cord when not using the set for long periods of time.
- Wenn das Gerät eine längere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker.
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes.
- Disinnestate il filo di alimentazione quando avete l'intenzione di non usare il filo di alimentazione per un lungo periodo di tempo
- Desconecte el cordón de energía cuando no utilice el equipo por mucho tiempo.
- Neem altijd het netsnoer uit het stopkontakt wanneer het apparaat gedurende een lange periode niet wordt gebruikt.
- Koppla ur nätkabeln om apparaten inte kommer att användas i lång tid.
- Deslígue o fio condutor de força quando o aparelho não tiver que ser usado por um longo período.



*(For sets with ventilation holes)

- *Do not obstruct the ventilation holes.
- Die Belüftungsöffnungen dürfen nicht verdeckt werden.
- Ne pas obstruer les trous d'aération.
- Non coprite i fori di ventilazione.
- No obstruya los orificios de ventilación
- De ventilatieopeningen mogen niet worden beblokkeerd.
- Täpp inte till ventilationsöppningarna.
- Não obstrua os orifícios de ventilação.



- Do not let foreign objects in the set.
- Keine fremden Gegenstände in das Gerät kommen lassen.
- Ne pas laisser des objets étrangers dans l'appareil.
- E' importante che nessun oggetto è inserito all'interno dell'unità
- No deje objetos extraños dentro del equipo
- Laat geen vreemde voorwerpen in dit apparaat vallen.
- Se till att främmande föremål inte tränger in i apparaten.
- Não deixe objetos estranhos no aparelho

- Do not let insecticides, benzene, and thinner come in contact with the set.
- Lassen Sie das Gerät nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen.
- Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil.
- Assicuratevvi che l'unità non venga in contatto con insetticidi, benzolo o solventi.
- No permita el contacto de insecticidas, gasolina y diluyentes con el equipo.
- Laat geen insektenverdelgende middelen, benzine of verfverdunner met dit apparaat in kontakt komen.
- Se till att inte insektsmedel på spraybruk, bensen och thinner kommer i kontakt med apparatens hölje.
- Não permita que inseticidas, benzina e dissolvente entrem em contacto com o aparelho

- Never disassemble or modify the set in any way.
- Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verändern.
- Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre
- Non smontate mai, nè modificate l'unità in nessun modo.
- Nunca desarme o modifique el equipo de ninguna manera.
- Nooit dit apparaat demonteren of op andere wijze modifiëren.
- Ta inte isär apparaten och försök inte bygga om den.
- Nunca desmonte ou modifique o aparelho de alguma forma.

- We greatly appreciate your purchase of the AVR-900/950RD.
- Model AVR-950RD has the same specifications as the AVR-900except for the addition of the RDS broadcast reception function.
- To be sure you take maximum advantage of all the features the AVR-900/950RD has to offer, read these instructions carefully and use the set properly. Be sure to keep this manual for future reference should any questions or problems arise.

- Wir begrüßen Ihren Kauf des AVR-900/950RD außerordentlich.
- Das Modell AVR-950RD hat die gleichen technischen Daten wie das Modell AVR-900, mit Ausnahme der zusätzlichen RDS-Rundfunkempfangsfunktion.
- Lesen Sie sich diese Bedienungsanleitung sorgfältig durch und bedienen Sie die Anlage richtig, damit Sie alle Merkmale, die der AVR-900/950RD zu bieten hat, maximal ausnutzen können. Bewahren Sie diese Bedienungsanleitung gut auf, so daß sie Ihnen bei eventuell auftretenden Fragen oder Störungen, jederzeit als Referenz zur Verfügung steht.

- Nous vous remercions de l'achat de cet ampli-tuner AVR-900/950RD.
- Le modèle AVR-950RD possède les même caractéristiques que le modèle AVR-900 sauf pour l'addition de la fonction de réception d'émission RDS.
- Prière de lire attentivement ce mode d'emploi afin d'obtenir la meilleure performance et une longue durée de vie sans problème de cet ampli-tuner AVR-900/950RD. S'assurer de conserver ce mode d'emploi pour s'y référer ultérieurement.

- Apprezziamo veramente il fatto che voi avete acquistato l'AVR-900/950RD.
- Il modello AVR-950RD presenta le stesse caratteristiche del modello AVR-900 ad eccezione della funzione di ricezione delle stazioni RDS.
- Leggete questo manuale attentamente ed usate l'unità in modo corretto per ottenere le migliori prestazioni di tutte le caratteristiche dell'AVR-900/950RD. Tenete questo manuale in un luogo sicuro per futuri riferimenti in caso sorgessero dei dubbi.

- Le estamos sinceramente agradecidos por su compra del AVR-900 /950RD.
- El modelo AVR-950RD tiene las mismas especificaciones que el AVR-900, excepto por el hecho de que además incorpora la función de recepción de emisiones RDS.
- A fin de aprovechar plenamente las características del AVR-900/950RD, lea detenidamente este manual de instrucciones antes de usar la unidad; asegúrese de operar la unidad correctamente, de acuerdo a las instrucciones. Conserve este manual para futuras consultas en caso de dudas o problemas.

- Wij stellen het zeer op prijs dat u de AVR-900/950RD heeft gekocht.
- Het model AVR-950RD heeft dezelfde technische gegevens als de AVR-900, maar beschikt daarnaast ook over de functie voor ontvangst van RDS-uitzendingen.
- Om alle kenmerken die de AVR-900/950RD te bieden heeft optimaal te kunnen benutten, is het nodig dat u deze gebruiksaanwijzing nauwkeurig doorleest en dat u het toestel juist gebruikt. Houd de handleiding bij zodat u ze later kan raadplegen wanneer u vragen heeft of zich eventueel problemen voordoen.

- Vi tackar dig för ditt val av AVR-900/950RD.
- Modell AVR-950RD har samma specifikationer som AVR-900 bortsett från att den också är försedd med RDS-funktioner för radiomottagning.
- Läs bruksanvisningen noga och följ föreskrifterna, så att du säkert kan utnyttja egenskaperna hos din AVR-900/950RD på bästa sätt. Behåll bruksanvisningen som hjälp i framtiden om frågor eller problem skulle uppstå.

● INSTALLATION PRECAUTIONS

Using this receiver or other electronic equipment containing microprocessors simultaneously with a tuner or TV may result in noise in the sound or picture.
If this should happen, take the following steps:

- Install the receiver as far as possible from the tuner or TV set.
- Keep the antenna lines of the tuner or TV as far as possible from the receiver's power cord and connection cables.
- This problem is especially frequent when using indoor antennas. We recommend using outdoor antennas and 75 Ω/ohms coaxial cables.

For cooling purposes, do not place another AV component directly on top of the receiver. Be sure to leave a space of at least 10 cm.

● VORKEHRRUNGEN ZUR INSTALLATION

Wenn Sie diesen Receiver oder ein anderes elektronisches Gerät, das Mikroprozessoren beinhaltet, zusammen mit einem Tuner oder einem Fernsehgerät benutzen, so können daraus Ton– oder Bildstörungen resultieren.
Führen Sie in einem derartigen Fall die nachfolgend aufgeführten Schritte aus:

- Installieren Sie den Receiver so weit wie möglich entfernt vom Tuner oder Fernsehgerät.
- Halten Sie die Antennenleitungen des Tuners oder Fernsehgerätes soweit wie möglich vom Netzkabel und den Anschlußkabeln des Receivers entfernt.
- Dieses Problem tritt besonders häufig bei der Verwendung von Innenantennen oder 300 Ohm Antennenzuleitungen auf. Wir empfehlen die Verwendung von 75Ω/ Ohm Koaxialkabeln.

Stellen Sie kein anderes AV–Gerät direkt auf den Receiver, damit eine ausreichende Belüftung gewährleistet ist. Achten Sie darauf, daß stets ein Zwischenraum von mindestens 10 cm gegeben ist.

● PRECAUTIONS D'INSTALLATION

L'utilisation de cet ampli–tuner ou de tout autre appareil électronique à microprocesseur près d'un tuner ou d'un téléviseur peut produire des parasites dans le son ou l'image.
Si cela se produit, prendre les mesures suivantes:

- Installer l'ampli–tuner aussi loin que possible du tuner ou du téléviseur.
- Disposer les fils d'antenne du tuner et du téléviseur aussi loin que possible du cordon d'alimentation du receveur et des câbles de connexion.
- Du bruit et des parasites peuvent se produire en particulier lors de l'utilisation d'antennes intérieures ou de câbles d'alimentation de 300 ohms. L'utilisation d'antennes extérieures et de câbles coaxiaux de 75 Ω/ohms est recommandée.

Pour permettre la dissipation de la chaleur, ne pas placer un appareil audio/vidéo directement sur le dessus de l'ampli–tuner. Laisser un espace d'au moins 10 cm.

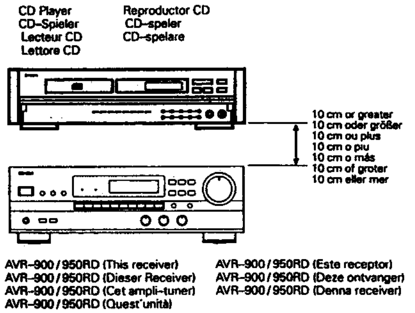
● PRECAUZIONI RIGUARDANTI L'INSTALLAZIONE

L'uso di questo ricevitore, o di altri componenti elettronici che contengono dei microprocessori, contemporaneamente con un sintonizzatore o un televisore potrebbe causare la generazione di rumore nel suono o nell'immagine.
In tal caso, procedete come segue:

- Installate il ricevitore il più lontano possibile dal sintonizzatore o dal televisore.
- Tenete le linee dell'antenna del sintonizzatore o del televisore il più lontano possibile dal cavo di alimentazione del ricevitore e dai cavi di collegamento.
- Questo problema si verifica spesso quando vengono usate delle antenne interne oppure dei fili alimentatori da 300 ohm. Vi raccomandiamo l'uso di antenne esterne e di cavi coassiali da 75 Ω/ohm.

Per motivi di raffreddamento, non collocate un altro componente AV direttamente sopra il ricevitore. Assicuratevidi lasciare uno spazio di almeno 10 cm tra le unità.

A note on stacking/Hinweis zum Aufeinanderstellen von Geräten/Remarque sur la juxtaposition/Nota sulla sovrapposizione/Apilamiento/Een opmerking i.v.m. het op elkaar plaatsen van de toestellen/Stapling av utrustningen


CD Player
CD–Spieler
Lecteur CD
Lettore CD
Reproductor CD
CD–speler
CD–spelare
10 cm or greater
10 cm oder größer
10 cm ou plus
10 cm o piu
10 cm o más
10 cm of groter
10 cm eller mer
AVR–900/950RD (This receiver)
AVR–900/950RD (Dieser Receiver)
AVR–900/950RD (Cet ampli–tuner)
AVR–900/950RD (Quest'unità)
AVR–900/950RD (Este receptor)
AVR–900/950RD (Deze ontvanger)
AVR–900/950RD (Denna receiver)

● PRECAUCIONES DURANTE LA INSTALACION

El uso simultáneo de este receptor o de otros equipos que contengan microprocesadores, con un sintonizador o televisor, podrá causar interferencias en el sonido o imagen.
Si esto sucediera, tome las siguientes medidas:

- Instale el receptor tan lejos del sintonizador o televisor como sea posible.
- Mantenga las líneas de antena del sintonizador o la TV tan lejos como sea posible del cable de alimentación del receptor o de los cables de conexión.
- Este problema será especialmente frecuente al usar antenas interiores o cables alimentadores de 300 ohmios. Le recomendamos emplear antenas exteriores y cables coaxiles de 75 Ω/ohmios.

A fin de mantener una buena ventilación, no instale otro componente AV directamente encima del receptor. Asegúrese de dejar un espacio de por lo menos 10 cm.

● VOORZORGSMAATREGELEN BIJ DE INSTALLATIE

Het gebruik van deze ontvanger of andere elektronische toestellen die microprocessors bevatten in kombinatie met een tuner of een TV kan leiden tot storing in het geluid of het beeld.
Tref de volgende maatregelen als dit gebeurt:

- Installeer de ontvanger zo ver mogelijk uit de buurt van de tuner of TV.
- Houd de antennedraden van de tuner of de TV zo ver mogelijk uit de buurt van het netsnoer en de aansluitkabels van de ontvanger.
- Dit probleem stelt zich vooral bij gebruik van binnenantennes of voedingsdraden van 300 ohm. Wij raden u aan gebruik te maken van buitenantennes en koaxkabels van 75 Ω/ohm.

Zet geen andere audio/video–komponent direkt bovenop de ontvanger met het oog op afkoelen van de apparatuur. Wij raden u aan een ruimte open te laten van minstens 10 cm.

● SÄRSKILDA PUNKTER VID INSTALLATIONEN

Om receivern eller annan elektronisk utrustning som innehållermikroprocessorer står påslagen alltför nära en tuner eller TV kan brus i ljud eller bild uppstå.
ör så här om detta händer:

- Flytta receivern så långt som möjligt från tunern eller TV'n.
- Dra tunerns eller TV'ns antennkablar så långt som möjligt från receiverns nätsladd och signalkablar.
- Problemet är särskilt märkbart vid användning av inomhusantenner eller 300 ohmiga matarkablar. Vi rekommenderar därför utomhusantenn och 75 Ω/ohmiga koaxialkablar.

Med tanke på kylningen får ingen annan apparat ställas direkt på receivern. Se till att det finns ett mellanrum på minst 10 cm.

● DECLARATION OF CONFORMITY

We declare under our sole responsibility that the product AV surround receiver AVR-900/950RD to which this declaration relates is in conformity with the following standards:
EN55013, EN55020, EN60555-2 and EN60555-3.

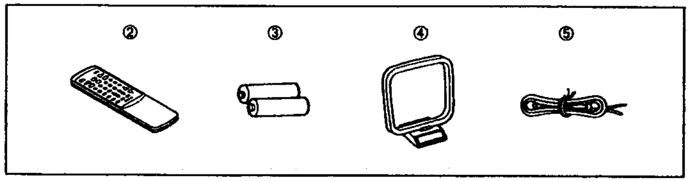
TABLE OF CONTENTS

1 Introduction 2, 3
2 Connections
2 – 1 Connecting the antenna terminals 4
2 – 2 Connecting the audio components 4
2 – 3 Speaker system connections 5
2 – 4 Connecting the video components 5
3 Remote Control Unit 5
4 Operations
4 – 1 Preparations for playback 6
4 – 2 Playing the program source
(stereo play back) 6
4 – 3 Simulcast play back 6
4 – 4 Using the muting function 6
4 – 5 Listen with headphones 6
4 – 6 Recording the program source 6
(recording the source currently being monitored.)
4 – 7 Front panel display 6
4 – 8 Using the surround function 6, 7
5 Listening to the radio
5 – 1 Auto preset memory 7
5 – 2 Auto tuning 8
5 – 3 Manual tuning 8
5 – 4 Preset memory 8
5 – 5 Recalling preset stations 8
5 – 6 RDS (Radio Data System)* 8
5 – 7 RDS search* 8
5 – 8 PTY search* 9
5 – 9 TP search* 9
5 –10 RT (Radio Text)* 9
* This function is only effective in the AVR–950RD.
6 Initialization of the Microprocessor 9
7 Last function memory 9
8 Troubleshooting 10
9 Specifications 10

● ACCESSORIES

Check that the following parts are included in addition to the main unit:

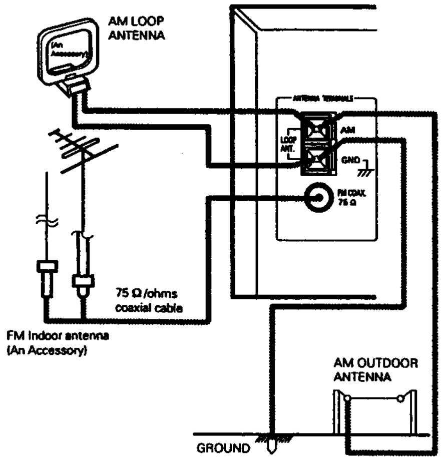
①	Operating instructions	1
②	Remote control unit (RC–195)	1
③	R6P/AA batteries	2
④	AM loop antenna	1
⑤	FM indoor antenna	1



"SERIAL NO. ____________________
PLEASE RECORD UNIT SERIAL NUMBER ATTACHED TO THE REAR OF THE CABINET FOR FUTURE REFERENCE"

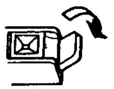
[2] CONNECTIONS

2-1 Connecting the antenna terminals


AM LOOP ANTENNA
(An Accessory)
ANTENNA TERMINALS
AM
LOOP ANT.
GND
FM COAX. 75 Ω
75 Ω/ohms coaxial cable
FM Indoor antenna (An Accessory)
AM OUTDOOR ANTENNA
GROUND

Connection of AM antennas

1. Push the lever.



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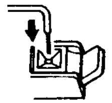
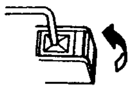
2. Insert the conductor



⇩

3. Return the lever.



ANTENNA INSTRATIONAN

- **FM ANTENNA**
  The supplied FM antenna can be used inside wooden houses for receiving local FM stations and other strong FM signals. Stretch out the ends of the antenna and mount the antenna on the wall or ceiling where optimum reception is achieved. A indoor FM antennas may not consistently ensure stable reception, due to environment changes. In such cases, the indoor FM antenna should only be used temporarily until an outdoor FM antenna has been installed.
  When connecting an outdoor FM antenna, the use of 75 Ω/ohms coaxial cable (3C-2V, 5C-2V) is strongly recommended.
- **AM ANTENNA**
  Attach the supplied AM loop antenna even when using an outdoor AM antenna.
  Connect the leads to the AM and GND terminals.
  Also use the AM terminals for connecting an outdoor AM antenna (when making such a connection do not disconnect the AM loop antenna.)
  Adjust the loop antenna to obtain optimum reception. Where broadcast stations are distant and only weak signals are received, or where signals are blocked, it is best to install an outdoor AM antenna.

NOTES

- This receiver has a full back-up system. When the power is turned on, the INPUT SELECTOR buttons are set to the last mode set before the power was turned off.
- When using this receiver in close proximity to video equipment (TV, VCR, VDP, etc.), noise may be generated in AM broadcasts. To avoid this, keep the receiver as far away from other video components as possible, or detach the AM loop antenna from the antenna holder and place it where noise is reduced. If the noise is not reduced, turn off the power of the video components when listening to AM broadcasts.

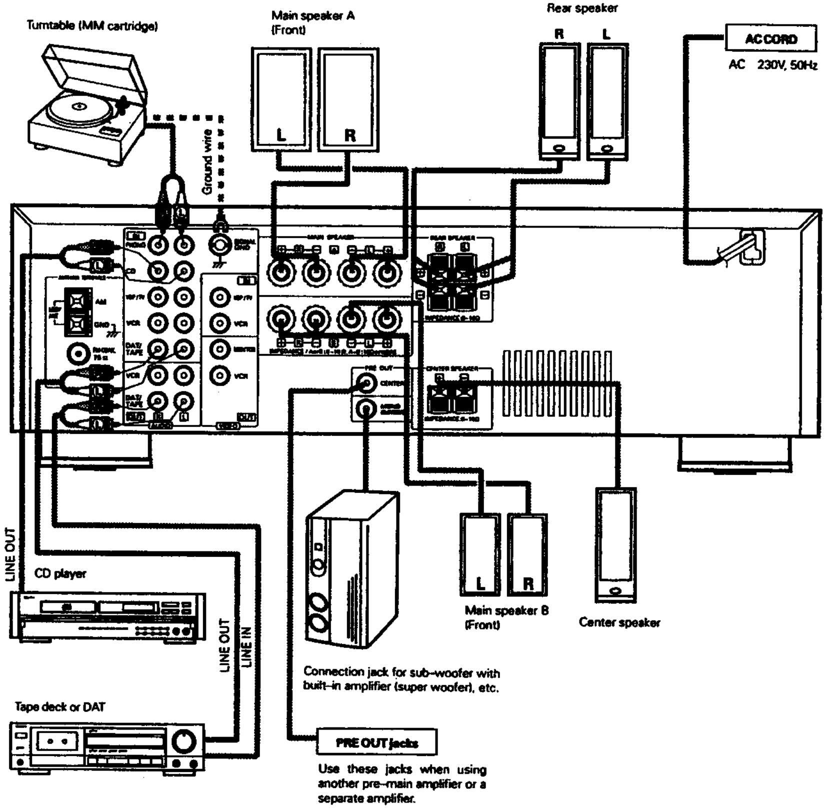
Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

- Do not plug in the power cord until all connections have been completed.
- Be sure to connect the left and right channels properly (left with left, right with right).
- Insert the plugs securely. Incomplete connections will result in the generation of noise.
- Note that binding pin plug cords together with power cords or placing them near a power transformer will result in the introduction of hum or other noise.
- If hum or other noise is produced when the ground wire is connected, disconnect it.
- Noise or humming may be generated if a connected component is used independently without turning the power of the AVR-900/950RD on. If this happens, turn on the power of the AVR-900/950RD.

2-2 Connecting the audio components

NOTE:
The receiver cannot be used with MC cartridges directly. Use a separate head amplifier or step-up transformer.

- **Precautions when connecting speakers**
  If a speaker is placed near a TV or video monitor, the colors on the screen may be disturbed by the speaker's magnetism. If this should happen, move the speaker away to a position where it does not have this effect.


Turntable (MM cartridge)
Ground wire
Main speaker A (Front)
L
R
Rear speaker
R
L
AC CORD
AC 230V, 50Hz
LINE OUT
CD player
LINE OUT
LINE IN
Tape deck or DAT
Connection jack for sub-woofer with built-in amplifier (super woofer), etc.
PRE OUT jacks
Use these jacks when using another pre-main amplifier or a separate amplifier.
L
R
Main speaker B (Front)
Center speaker

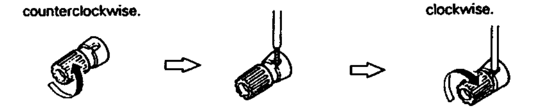
2-3 Speaker System Connections

- This receiver can accommodate connections of a total of seven speakers including two set of (front) main amplifier speakers (A and B), one set of rear speakers, and one center speaker.
- Connect the speaker terminals with the speakers making sure that like polarities are matched (⊕ with ⊕, ⊖ with ⊖). Mismatching of polarities will result in weak central sound, unclear orientation of the various instruments, and the sense of direction of the stereo being impaired.
- When making connections, take care that none of the individual conductors of the speaker cord come in contact with adjacent terminals, with other speaker cord conductors, or with the rear panel.

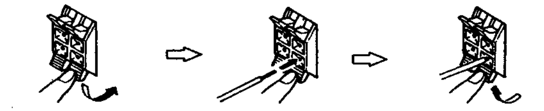
- **Speaker Impedance**
- When speaker systems A and B are use separately, speakers with an impedance of from 8 to 16 Ω/ohms can be connected.
  - When using with two pairs of speakers (A + B), use speakers with an impedance of 8 Ω/ohms or greater.
  - Speakers with an impedance of 8 to 12 Ω/ohms can be connected for use as center and rear speakers.
  - The protection circuit may operate or damage may occur when speakers with an impedance outside of the above range are used.

Connecting the speaker terminals

1. Loosen by turning counterclockwise.	2. Insert the cord.	3. Tighten by truning clockwise.

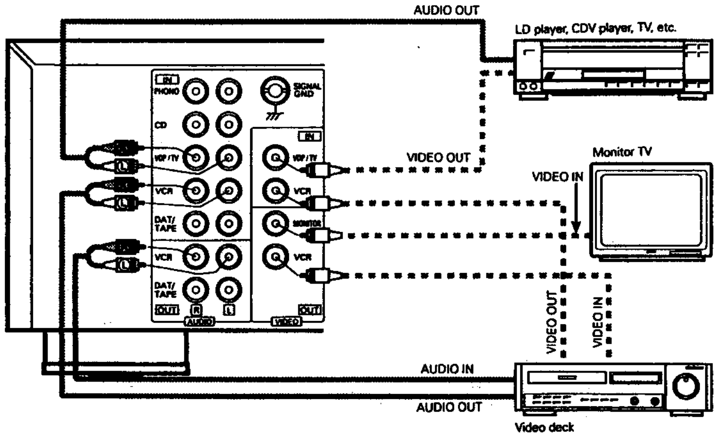


1. Press the lever	2. Insert the cord.	3. Release the lever.



2-4 Connecting the video components

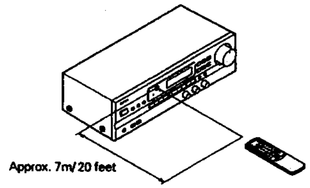
To connect the video signal, connect using a 75 Ω/ohms video signal cable cord. Using an improper cable can result in a drop in sound quality.


AUDIO OUT
LD player, CDV player, TV, etc.
IN
PHONO
CD
VDP/TV
VCR
DAT/TAPE
VCR
DAT/TAPE
OUT
R
L
AUDIO
SIGNAL GND
IN
VDP/TV
VCR
MONITOR
VCR
OUT
VIDEO
VIDEO OUT
Monitor TV
VIDEO IN
VIDEO OUT
VIDEO IN
AUDIO IN
AUDIO OUT
Video deck

3 REMOTE CONTROL UNIT

Following the procedure outlined below, insert the batteries before using the remote control unit.

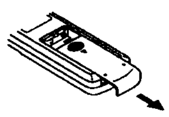
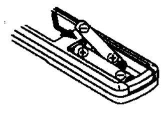
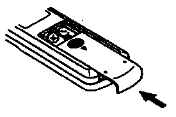
■ Range of operation of the remote control unit


Approx. 7m/20 feet

Point the remote control unit at the remote control sensor as shown on the diagram at the left.

NOTES:
- The remote control unit can be used from a straight distance of approximately 7 meters/20 feet, but this distance will shorten or operation will become difficult if there are obstacles between the remote control unit and the remote control sensor, if the remote control sensor is exposed to direct sunlight or other strong light, or if operated from an angle.
- Neon signs or other devices emitting pulse-type noise nearby may result in malfunction, so keep the set as far away from such devices as possible.

■ Inserting the batteries

1. Open the bottom cover of the remote control unit and remove the battery cover.	2. Insert the two R6P/AA batteries, matching the ⊕ and ⊖ marks on the batteries with those in the case.	3. Close the bottom cover until it clicks shut.
		

NOTES
- Use only AA, R6P, UM-3 batteries for replacement.
- Be sure the polarities are correct. (See the illustration inside the battery compartment.)
- Remove the batteries if the remote control transmitter will not be used for an extended period of time.
- If batteries leak, dispose of them immediately. Avoid touching the leaked material or letting it come in contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.
- Have replacement batteries on hand so that the old batteries can be replaced as quickly as possible when the time comes.

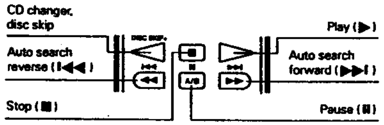
■ System code buttons

DENON remote-controllable audio components can be controlled using this unit's remote control unit.
Note that some components, however, cannot be operated with this remote control unit.

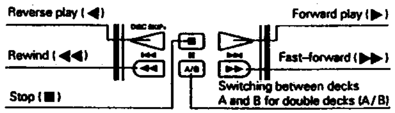
❶ Set the slide switch to the position for the component to be operated (CD or DECK).

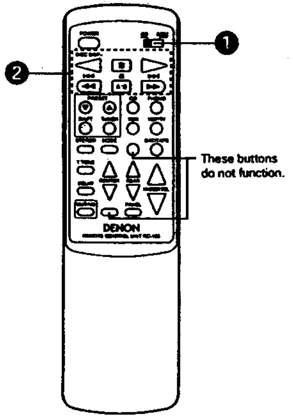
❷ Use the buttons shown below to operate the component.
For details, refer to the respective component's manual.

a. For CD players


CD changer, disc skip
Auto search reverse (I◀◀)
Stop (■)
DISC SKIP
Play (▶)
Auto search forward (▶▶I)
Pause (⏸)

b. For tape decks


Reverse play (◀)
Rewind (◀◀)
Stop (■)
DISC SKIP
Forward play (▶)
Fast-forward (▶▶)
Switching between decks A and B for double decks (A/B)


❶
❷
These buttons do not function.
DENON

4 OPERATIONS

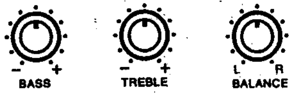
4-1 Preparations for Play Back

❶ Check that all connectioned are proper.

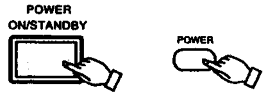
❷ Set to the minimum position.

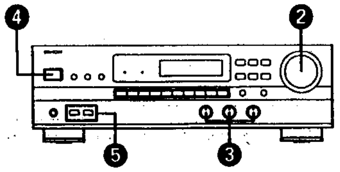
MASTER VOLUME

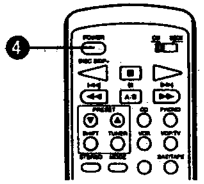
❸ Set to the center position.



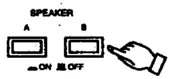
❹ Press the power button to turn the power on.





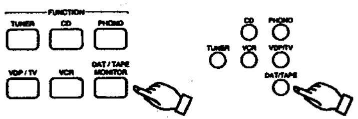


❺ Select the front speakers.
Press the speaker A or B switch to turn the speaker on.



4-2 Playing the program source (Stereo play back)

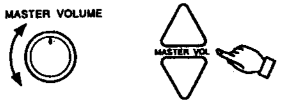
❶ Select the source to be played.



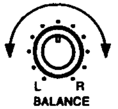
❷ Select the STEREO mode.

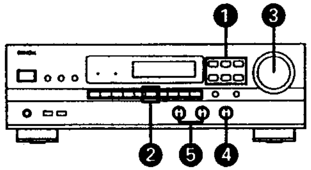
DOLBY
STEREO PRO LOGIC
STEREO

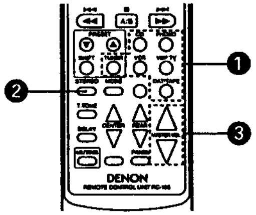
❸ Adjust the MASTER VOLUME control.



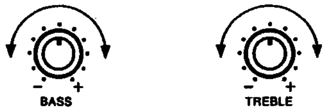
❹ Adjust the front left/right BALANCE.
Turn the control counterclockwise to reduce the volume of the right channel, clockwise to reduce the volume of the left channel.







❺ Adjust the BASS and TREBLE.



Turn the control clockwise to increase the bass, counterclockwise to decrease it.

Turn the control clockwise to increase the treble, counterclockwise to decrease it.

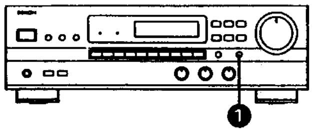
4-3 Simulcast playback

Use this switch to monitor a video source other than the audio source.

❶ Press and hold the VIDEO SELECT button until the desired source appears on the display.

VIDEO SELECT
VDP/TV
VCR

The source switches as shown above.



* Cancelling simulcast playback

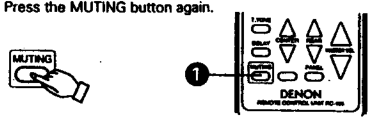
- Press the VIDEO SELECT button once more.
- Select the VIDEO function.

4-4 Using the muting function

Use this to turn off the audio output temporarily.

❶ Press the MUTING button.

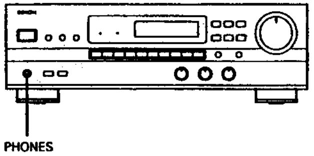
* Cancelling MUTING mode.
Press the MUTING button again.



This function can only be set from the remote control unit.
The STANDBY LED flashes when the muting function is set.

4-5 Listen with headphones

Connect the headphones to the PHONES jacks.
When listening with headphones privately, set A, B SPEAKER switches and the superwoofer's power switch to the OFF position and set the stereo surround mode.



4-6 Recording the program source

(recording the source currently being monitored)

❶ Follow steps 1 to 3 under "Playing the program source".

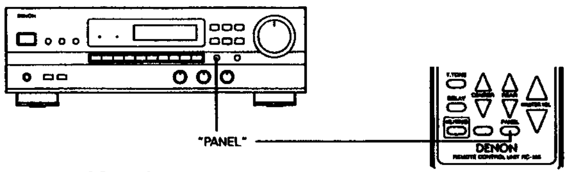
❷ Start recording on the tape or video deck.
For instructions, refer to the component's operating instructions.

Simultaneous recording

The signals of the source selected with the function selector button are output simultaneously to the DAT/TAPE and VCR REC OUT jacks. If a total of two tape and/or video decks are connected and set to the recording mode, the same source can be recorded simultaneously on both decks.
In addition, if the TAPE MONITOR (DAT/TAPE) button is pressed, the audio signals from the tape deck are output to the VCR AUDIO REC OUT jacks.

4-7 Front panel display

Descriptions of the unit's operations are also displayed on the front panel display. In addition, the display can be switched to check the unit's operating status while playing a source by pressing the PANEL button.



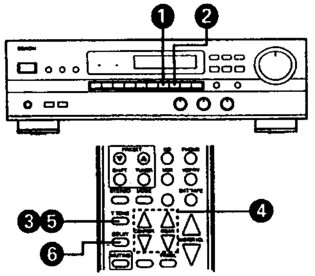
4-8 Using the surround function

Types of surround modes and their characteristics

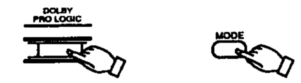
1	Dolby Pro Logic	Use this when playing program sources recorded in Dolby Surround or Dolby stereo.
2	CONCERT HALL	Use this setting to create the atmosphere of a concert hall. There will be no output from the center speaker.
3	LIVE	Use this setting to create the atmosphere of watching a live performance. There will be no output from the center speaker.

Before using the surround function

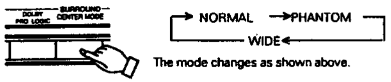
Make the following adjustments before using the surround function.



❶ Set the Dolby Pro Logic mode.

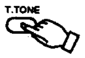


❷ Select the center mode.
Select the center mode according to the center speaker.

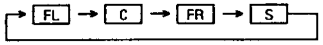


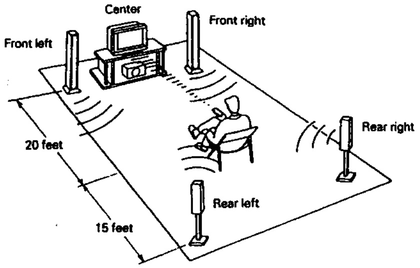
The mode changes as shown above.

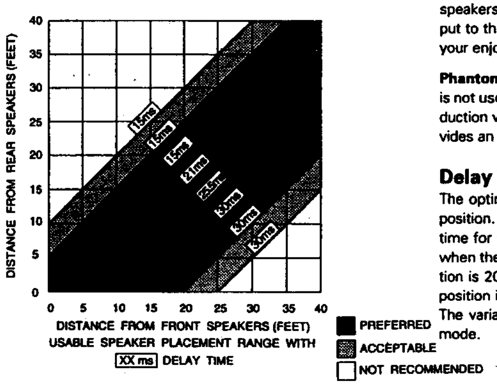
❸ Emit the test tone.



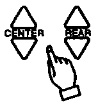
Test tones are produced from the speakers in the order shown below, at 4 second intervals for the first two cycles, 2 second intervals after that.







❹ Adjust the center and rear levels to set the volume of the speakers to the same level.



❺ Turn the test tone off.

❻ Adjust the delay time and seating position as necessary.

Center Mode

Set the center mode as described below, according to the type of center speaker being used.

Normal mode: This mode is suited for an arrangement in which the center channel speaker is smaller than the left and right speakers. Signals below 100 Hz which have almost no effect on directional orientation are distributed to the left and right channels, whereas the center channel output signals greater than 100 Hz. As a result, the bass of the left and right channels increases the apparent deepness of the sound.

Wide mode: This mode is suited for an arrangement in which the center channel speaker is of the same grade as the left and right speakers. The entire sound band from low region to high is output to the center channel to provide an exciting sound field for your enjoyment.

Phantom mode: Use this mode when center channel speaker is not used. A directional emphasis circuit provides signal reproduction which is electrically oriented to the center and this provides an exciting sound field for your enjoyment.

Delay Time

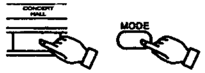
The optimum delay time will differ depending on the listening position. Referring to the chart at left, set the optimum delay time for your room's space and seating position. For example, when the distance from the front speakers to the listening position is 20 feet and that from the rear speakers to the listening position is 15 feet, the optimum delay time will be 21 ms.
The variable range of the delay time differs depending on the mode.

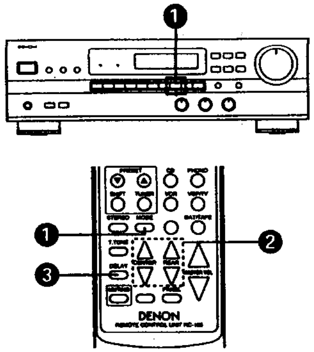
Personal Memory Plus function .... for EASY TO USE

The AVR-900/950RD automatically stores the surround mode adding effects for all input sources. The corresponding surround mode is recalled automatically each time an input source is selected.

Using the surround function

❶ Select the surround mode according to the input source.





❷ If necessary, adjust the levels.

❸ Adjust the parameters to the desired settings.

Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under Canadian patent number 1,037,877. "Dolby," "Pro Logic," and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Operating Possible in the Various Surround Modes

The following is a list of the buttons and functions which can be operated during the different surround modes. Figures in parentheses indicate adjustment ranges.

		OUTPUT	CENTER LEVEL	REAR LEVEL	CENTER MODE	TEST TONE	DELAY TIME
DOLBY PRO LOGIC	NORMAL	O	O (0~−24dB)	O (0~−24dB)	O	O	O (15~30ms)
	PHANTOM	O	×	O (0~−24dB)	O	O	O (15~30ms)
	WIDE	O	O (0~−24dB)	O (0~−24dB)	O	O	O (15~30ms)
CONCERT HALL		O	×	O (0~−24dB)	Δ*1	×	O (0~33ms)
LIVE		O	×	O (0~−24dB)	Δ*1	×	O (0~33ms)

O: Operation possible   ×: Operation not possible

*1 Switches to the Dolby Pro Logic from any modes other than Dolby Pro Logic.
The level of the center and rear channels can be adjusted by 2 dB step.
The delay time can be set by 1.5 ms step.

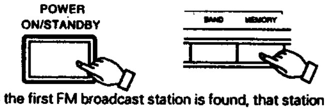
- The sound may be distorted for some sources if the rear level is raised during surround playback.
If this happens, lower the rear level.

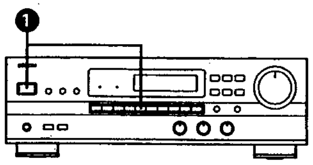
5 LISTENING TO THE RADIO

5-1 Auto preset memory

This unit is equipped with a function for automatically searching for FM broadcast stations and storing them in the preset memory.

❶ Press the POWER button while holding in the MEMORY button. The unit automatically begins searching for FM broadcast stations.





❷ When the first FM broadcast station is found, that station is stored in the preset memory at channel A1. Subsequent stations are automatically stored in order at preset channels A2 to A8, B1 to B8, C1 to C8, D1 to D8 and E1 to E8, for a maximum of 40 stations.

❸ Channel A1 is tuned in after the auto preset memory operation is completed.

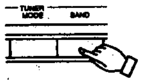
NOTES:
- If an FM station cannot be preset automatically due to poor reception, use the "Manual tuning" operation to tune in the station, then preset it using the manual "Preset memory" operation.
- RDS stations are stored in the memory with priority.
- To interrupt this function, press the power button.

5-2 Auto tuning

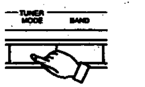
❶ Set the input function to "TUNER".

FUNCTION
TUNER
CD
TUNER

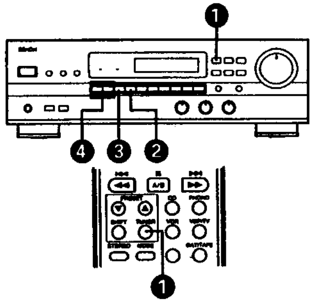
❷ Watching the display, press the BAND button to select the desired band (AM or FM).



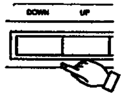
❸ Press the MODE button to set the auto tuning mode.



"AUTO" appears on the display.



❹ Press the TUNING UP or DOWN button.



Automatic searching begins, then stops when a station is tuned in.

If tuning does not stop at the desired station, use to the "Manual tuning" operation.

5-3 Manual tuning

❶ Set the input function to "TUNER".

❷ Watching the display, press the BAND button to select the desired band (AM or FM).

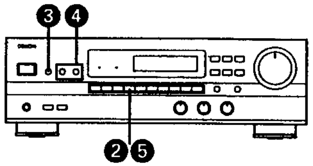
❸ Press the MODE button to set the manual tuning mode. Check that the display's "AUTO" indicator turns off.

❹ Press the TUNING UP or DOWN button to tune in the desired station. The frequency changes continuously when the button is held in

NOTES:

- When in the auto tuning mode on the FM band, the "STEREO" indicator lights on the display when a stereo broadcast is tuned in. At open frequencies, the noise is muted and the "TUNED" and "STEREO" indicators turn off.
- When the manual tuning mode is set, FM stereo broadcasts are received in monaural and the "STEREO" indicator turns off.

5-4 Preset memory



❶ Use the "Auto tuning" or "Manual tuning" operation to tune in the station to be preset in the memory.

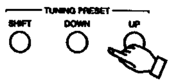
❷ Press the MEMORY button.

BAND
MEMORY

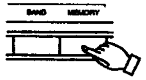
❸ Press the SHIFT button and select the desired memory block (A to E).

TUNING PRESET
SHIFT
DOWN
UP

❹ Press the PRESET UP or DOWN button to select the desired preset channel (1 to 8).

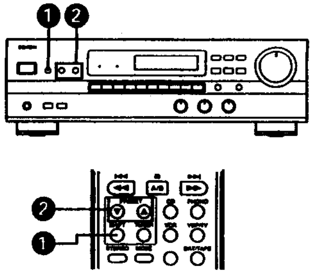


❺ Press the MEMORY button again to store the station in the preset memory.



To preset other channels, repeat steps ❷ to ❺.
A total of 40 broadcast stations can be preset — 8 stations (channels 1 to 8) in each of blocks A to E.

5-5 Recalling preset stations



❶ Watching the display, press the SHIFT button to select the preset memory block

TUNING PRESET
SHIFT
DOWN
UP
SHIFT

❷ Watching the display, press the PRESET UP or DOWN button to select the desired preset channel.

TUNING PRESET
SHIFT
DOWN
UP
PRESET

5-6 RDS (Radio Data System) (for AVR-950RD only)

RDS (works only on the FM band) is a broadcasting service which allows station to send additional information along with the regular radio program signal.
The following three types of RDS information can be received on this unit:

● Program Type (PTY)

PTY identifies the type of RDS program.
The program types and their displays are as follows:

NEWS	(News)
AFFAIRS	(Current Affairs)
INFO	(Information)
SPORT	(Sports)
EDUCATE	(Education)
DRAMA	(Drama)
CULTURE	(Culture)
SCIENCE	(Science)
VARIED	(Varied)
POP M	(Pop Music)
ROCK M	(Rock Music)
MOR M	(M.O.R. Music)
LIGHT M	(Light Classics)
CLASSICS	(Serious Classics)
OTHER M	(Other Music)

● Traffic Program (TP)

TP identifies programs that carry traffic announcements.
This allows you to easily find out the latest traffic conditions in your area before you leaving home.

● Radio Text (RT)

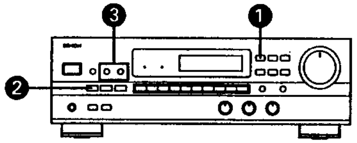
RT allows the RDS station to send text messages that appear on the display.

5-7 RDS search (for AVR-950RD only)

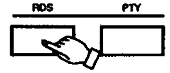
Use this function to automatically tune to FM stations that provide RDS service.

❶ Set the input function to "TUNER".

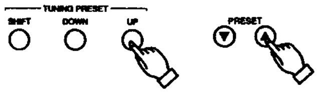
FUNCTION
TUNER
CD
TUNER



❷ Press the RDS button until "RDS SEARCH" appears on the display.



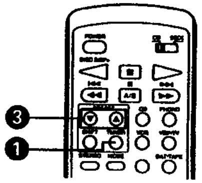
❸ Press the PRESET UP or DOWN button to automatically begin the RDS search operation.



If no RDS stations is found with above operation, all the respection band are searched.

❹ When a broadcast station is found, that station's name appears on the display.

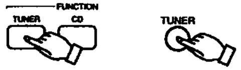
❺ To continue searching, repeat step 3.
If no other RDS station is found when all the frequencies are searched, "NO RDS" is displayed.

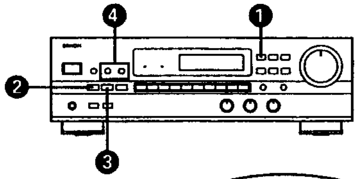


5-8 PTY search (for AVR-950RD only)

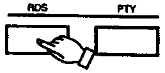
Use this function to find RDS stations broadcasting a designated program type (PTY).
For a description of each program type, refer to "Program Type (PTY)".

❶ Set the input function to "TUNER".

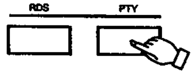


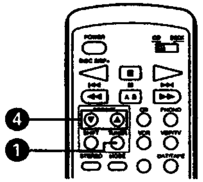


❷ Press the RDS button until "PTY SEARCH" appears on the display.

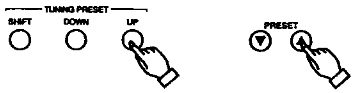


❸ Watching the display, press the PTY button to call out the desired program type.





❹ Press the PRESET UP or DOWN button to automatically begin the PTY search operation.



If there is no station broadcasting the designated programme type with above operation, all the reception bands are searched.

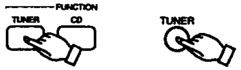
❺ The station name is displayed on the display after searching stops.

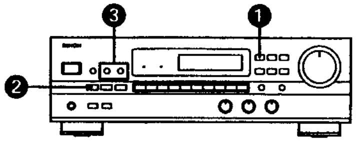
❻ To continue searching, repeat step ❹.
If no other station broadcasting the designated programme type is found when all the frequencies are searched, "NO PROGRAMME" is displayed on the display.

5-9 TP search (for AVR-950RD only)

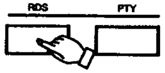
Use this function to find RDS station broadcasting traffic programme (TP stations).

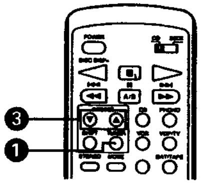
❶ Set the input function to "TUNER".



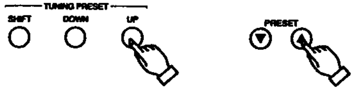


❷ Press the RDS button until "TP SEARCH" appears on the display.





❸ Press the PRESET UP or DOWN button TP search begins.



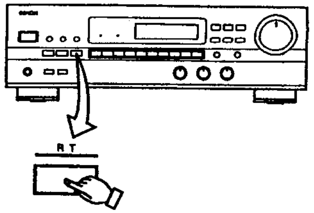
If no TP station is found with above operation, all the reception bands are searched.

❹ The station name is displayed after searching stops.

❺ To continue searching, repeat step ❸.
If no other TP station is found when all the frequencies are searched, "NO PROGRAMME" is displayed.

5-10 RT (Radio Txt) (for AVR-950RD only)

"RT" appears on the display when radio text data is received.
When the RT button is pressed while receiving an RDS broadcast station, the text data broadcast from the station is displayed. To turn the display off, press the RT button again. If no text data is being broadcast, "NO TEXT DATA" is displayed.



6 INITIALIZATION OF THE MICROPROCESSOR

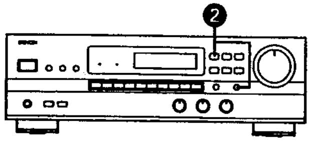
When the indication of the MFD display is not normal or when the operation of the unit does not shows the reasonable result, the initialization of the microprocessor is required by the following procedure.

❶ Switch off the unit and remove the AC power cord from the wall outlet.

❷ Hold the following TUNER button and VIDEO SELECT button, and plug the power cord into the outlet.

❸ Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons.

❹ Switch on the unit and the microprocessor will be initialized.



7 LAST FUNCTION MEMORY

- This receiver is equipped with a last function memory which stores the input and output setting conditions as they were immediately before the power is switched off.
  This function eliminates the need to perform complicated resettings when the power is switched on.
- This receiver is also equipped with a back-up memory. This function provides approximately one week of memory storage with the power cord disconnected.

8 TROUBLESHOOTING

If a problem should arise, first check the following:

1. **Are the connections correct?**
2. **Have you operated the amplifier according to the Operating Instructions?**
3. **Are the speakers, turntable, and other components operating properly?**

If the receiver is not operating properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. Disconnect the power immediately and contact your store of purchase.

	Symptom	Cause	Measures	Page
Common problemss arising when listening to the CD, records, tapes, and bbroadcasts, etttc.	DISPLAY not lit and sound not produced when power switch set to on.	• Power cord not plugged in securely.	• Check the insertion of the power cord plug.	4
	DISPLAY lit but sound not produced.	• Speaker cords not securely connected. • Speaker switch is off. • Improper position of the audio function button. • Volume control set to minimum. • MUTING is on.	• Connect securely. • Turn on speaker switch. • Set to a suitable position. • Turn volume up to suitable level. • Switch off MUTING.	4, 5 6 6 6 6
	–PROTECT– display appears.	• Speaker terminals are short–circuited. • Block the ventilation holes of the set. • The unit is operating at continuous high power conditions and/or inadequate ventilation.	• Switch power off, connect speakers properly, then switch power back on. • Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on. • Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on.	4 — —
	Sound produced only from one channel.	• Incomplete connection of speaker cords. • Incomplete connection of input/output cords. • Left/right balance is off.	• Connect securely. • Connect securely. • Adjust balance knob properly.	4 4, 5 6
	Positions of instruments reversed during stereo playback.	• Reverse connections of left and right speakers or left and right input/output cords.	• Check left and right connections.	—
	Sound seems distorted.	• Rear level is too high.	• Set the rear level to lower level.	7
When playing records.	Humming noise produced when record is playing.	• Ground wire of turntable not connected properly. • Incomplete PHONO jack connection. • TV or radio transmission antenna nearby.	• Connect securely. • Connect securely. • Contact your store of purchase.	4 4 —
	Howling noise produced when volume is high.	• Turntable and speaker systems too close together. • Floor is unstable and vibrates easily.	• Separate as much as possible. • Use cushions to absorb speaker vibrations transmitted by floor. If turntable is not equipped with insulators, use audio insulators (commonly available).	— —
	Sound is distorted.	• Stylus pressure too weak. • Dust or dirt on stylus. • Cartridge defective.	• Apply proper stylus pressure. • Check stylus. • Replace cartridge.	— — —
	Volume is weak.	• MC cartridge being used.	• Replace with MM cartridge or use a head amplifier or step–up transformer.	4
Remote control unit	Receiver does not operate properly when remote control unit is used.	• Batteries dead. • Remote control unit too far from receiver. • Obstacle between receiver and remote control unit. • Different button is being pressed. • ⊕ and ⊖ ends of battery inserted in reverse.	• Replace with new batteries. • Move closer. • Remove obstacle. • Press the proper button. • Insert batteries properly.	5 5 5 5

9 SPECIFICATION

- **Audio Section**

(Power amplifier)	FRONT (main 2ch driven)		
Rated output:	**[AVR-900]**	**[AVR-950RD]**	
	60 W + 60 W	65 W + 65 W	(8 Ω/ohms, 20 Hz – 20 kHz with 0.08% T.H.D.)
(All properties shown are only for the power amplifier stage.)	CENTER (center 1ch driven)		
	60 W	65 W	(8 Ω/ohms, 20 Hz – 20 kHz with 0.08% T.H.D.)
	REAR (rear 2ch driven)		
	15 W + 15 W	15 W + 15 W	(8 Ω/ohms, 1 kHz with 0.3% T.H.D.)
Output terminals:	Front:	8 to 16 Ω/ohms	
	Center:	8 to 16 Ω/ohms	
	Rear:	8 to 16 Ω/ohms	
(Pre–amplifier)			
Line input (Each line input – FRONT SP OUT)			
Input sensitivity / impedance:	150 mV/47 kΩ/kohms	PHONO (MM): 2.5 mV/47 kΩ/kohms	
Frequency response:	10 Hz to 50 kHz:	±3 dB	
Tone control range:	BASS:	±10 dB at 100 Hz	
	TREBLE	±10 dB at 10 kHz	
Signal–to–noise ratio:	92 dB (STEREO)		
Phono equalizer (PHONO input – REC OUT)			
RIAA deviation:	±1dB (20 Hz to 20 kHz)		
Signal–to–noise ratio:	74 dB (A weighting, with 5 mV input)		
Rated output / Maximum output:	150 mV / 8 V		
Distortion factor:	0.03% (1 kHz, 1 V)		

- **Tuner Section**

	[FM] (note: μV at 75 Ω/ohms, 0 dBf = 1 × 10^{-15} W)		**[AM]**
Receiving Range:	87.50 MHz ~ 108.00 MHz		522 kHz ~ 1611 kHz
Usable Sensitivity:	1.0 μV (11.2 dBf)		18 μV
50 dB Quieting Sensitivity:	MONO	1.6 μV (15.3 dBf)	
	STEREO	23 μV (38.5 dBf)	
Signal to Noise Ratio (IHF–A):	MONO	80 dB	50 dB
	STEREO	75 dB	
Total Harmonic Distortion (at 1 kHz):	MONO	0.4%	
	STEREO	0.5%	

- **Video Section**

Standard video jacks	
Input and output level / impedance:	1 Vp–p/75 Ω/ohms
Frequency response:	2 Hz to 8 MHz +0, −3 dB

- **General**

Power supply:	AC 230 V, 50 Hz
Power consumption:	200 W [AVR–900] 220 W [AVR–950RD]
Maximum external dimensions:	434 (W) × 142 (H) × 303 (D) mm (17–3/32" × 5–19/32" × 11–15/16")
Weight:	7.7 kg (17 lbs)

- **Remote control unit**

System remote control RC–195:	Total buttons:	28	
	DENON system code		
	CD player:	6 buttons	(SWITCHED)
	Cassette deck:	6 buttons	
	AVR–900/950RD fixed codes:	22 buttons	
	Batteries:	R6P/AA Type (two batteries)	
	External dimensions:	51 (W) × 175 (H) × 18.5 (D) mm (2" × 6–57/64" × 47/64")	
	Weight:	100 g (Approx. 3.5 oz) (including batteries)	

* For purposes of improvement, specifications and design are subject to change without notice.

PARTS LIST OF P. W. BOARD

Note. Refer to the service manual of AVR-900 for parts list of P.W.Board as the following.

Part Name	Part No.	Reference Page
Main Amp.	1U-2865	Page 24~25
Input & Surround	1U-2867	Page 26~27
Tuner & Volume	1U-2889	Page 27~28
FLD & Video	1U-2883	Page 29
Rear Amp.	1U-2866	Page 30

1U-2865D MAIN AMP P.W.B. UNIT ASS'Y (Same as 1U-2865 except the following.)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC911	262 1701 906	IC :SAA6579T	Add
IC912	262 1929 908	IC LC7074M-TE-R	Add
D911	276 0616 907	Diode 1SS252	Add
RESISTORS GROUP			
R375	241 2398 984	Carbon 1.3kohm 1/4W	Change
CAPACITORS GROUP			
C351,352	254 6200 003	Electrolytic 10000µF/56V	Change
C428	255 1264 982	Film 0.0047µF/50V	Add
C911,912	253 4537 908	Ceramic 27pF/50V	Add
C913	254 4254 909	Electrolytic 10µF/16V	Add
C914	254 4260 951	Electrolytic 2.2µF/50V	Add
C915	253 1179 990	Ceramic 560pF/50V	Add
C918	254 4254 909	Electrolytic 10µF/16V	Add
C919	253 1181 904	Ceramic 0.01µF/50V	Add
OTHERS PARTS GROUP			
XT911	399 0178 007	Crystal (4.332MHz)	Add
XT912	399 0261 901	CO.DCRHTP4.00M	Add
CN14A	205 0375 042	14P Connector Base (KR-PH)	Change

1U-2866A REAR AMP P.W.B. UNIT ASS'Y (Same as 1U-2866 except the following.)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC501,502	263 0855 005	IC :SI-18725	Change
RESISTORS GROUP			
⚠R557	242 0073 000	Metallic 2.2Mohm 1/2W	Delete
CAPACITORS GROUP			
C361~364	255 1265 907	Film 6800pF/50V	Add
C513,514	255 1264 982	Film 4700pF/50V	Add
C517,518	254 4257 713	Electrolytic 3300µF/35V	Change
C531,532	253 1179 903	Ceramic 100pF/50V	Change
C559	253 8014 702	Film 0.1µF/400V	Change
OTHERS PARTS GROUP			
	203 0640 001	1P SIN Cord Ass'y	Delete
	203 0640 014	1P SIN Cord Ass'y	Delete
⚠	203 3941 008	AC Outlet (2P)	Delete
	205 0606 025	2P Wrapping Terminal	Add
F011,012	206 1076 000	Fuse 5.0A	Delete
F001	206 1076 026	Fuse 8.0A	Delete
F002	206 1075 056	Fuse 3.15A	Change
⚠	233 6058 012	Power Trans	Change
-	415 0299 000	Condenser Cover	Add

1U-2867A INPUT & SURROUND P.W.B. UNIT ASS'Y
(Same as 1U-2867 except the following.)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	263 0896 909	IC NJM2068MD	Change
RESISTORS GROUP			
J101,102	241 2400 911	Carbon 4.7kohm 1/4W	Add
CAPACITORS GROUP			
C105,106	257 0004 961	Ceramic 100pF/50V (Chip)	Add
C121~128	257 0004 903	Ceramic 56pF/50V (Chip)	Add
C147,148	257 0004 961	Ceramic 100pF/50V (Chip)	Add
C281,282	255 1264 908	Film 0.001µF/50V	Add
OTHERS PARTS GROUP			
LF101,102	235 9003 002	FTZ Choke Coil	Add

1U-2883E FLD & VIDEO P.W.B. UNIT ASS'Y
(Same as 1U-2883 except the following.)

Ref. No.	Part No.	Part Name	Remarks
RESISTORS GROUP			
R706	241 2399 967	Carbon 3kohm 1/4W	Add
JV83	241 2398 955	Carbon 1kohm 1/4W	Add
OTHERS PARTS GROUP			
SW705~707	212 4788 002	Tact Switch	Add
CN14A	204 6554 000	14P PH-SAN Connector Cord	Change

1U-2889D TUNER & VOLUME P.W.B. UNIT ASS'Y
(Same as 1U-2889 except the following.)

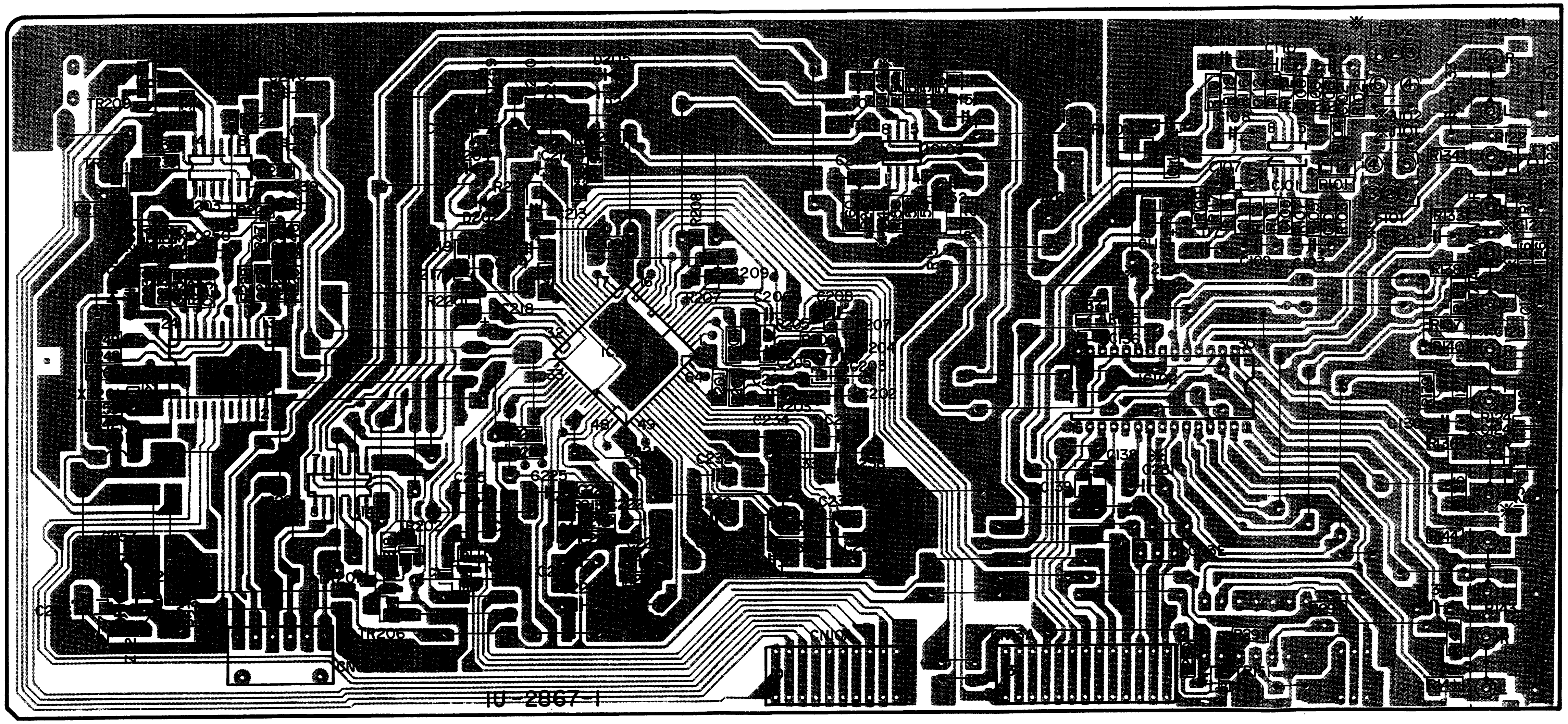
Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC004	261 0079 005	IC FM Front End (U)	Change
TR001	275 0051 909	Transistor 2SK161(GR)	Add
RESISTORS GROUP			
R002	241 2400 937	Carbon 5.6kohm 1/4W	Add
R004	241 2400 995	Carbon 10kohm 1/4W	Add
R005	241 2397 969	Carbon 390ohm 1/4W	Change
R006	241 2397 943	Carbon 330ohm 1/4W	Add
R022	241 2402 935	Carbon 39kohm 1/4W	Change
R023	241 2399 909	Carbon 1.6kohm 1/4W	Add
R032	241 2403 989	Carbon 160kohm 1/4W	Add
R035	241 2403 989	Carbon 160kohm 1/4W	Add
R037,038	241 2403 934	Carbon 100kohm 1/4W	Change
R039,040	241 2399 912	Carbon 1.8kohm 1/4W	Change
R041,042	241 2399 970	Carbon 3.3kohm 1/4W	Change
R050	241 2396 928	Carbon 1kohm 1/4W	Add
CAPACITORS GROUP			
C006	253 1181 904	Ceramic 0.01µF/50V	Add
C023	253 4538 949	Ceramic 100pF/50V	Delete
C026	254 4254 912	Electrolytic 22µF/16V	Add
C053,054	253 4448 903	Ceramic 330pF/50V	Change
C055	253 4538 965	Ceramic 120pF/50V	Add
C266	253 1180 934	Ceramic 1200pF/50V	Change
OTHERS PARTS GROUP			
LF001	232 9010 009	Anti Birdie Filter	Add
LF002,003	232 0085 004	:LPF	Add
CF001	261 0146 006	FMCFSK107M2-A	Change

PRINTED WIRING BOARD

1U-2867 A INPUT AND SURROUND P.W.B. ASS'Y

IC101	O
J101, 102	O
C105, 106	O
C121~128	O
C147, 148	O
C281, 282	O
LF101, 102	O

Note:
O : Used
X : Not used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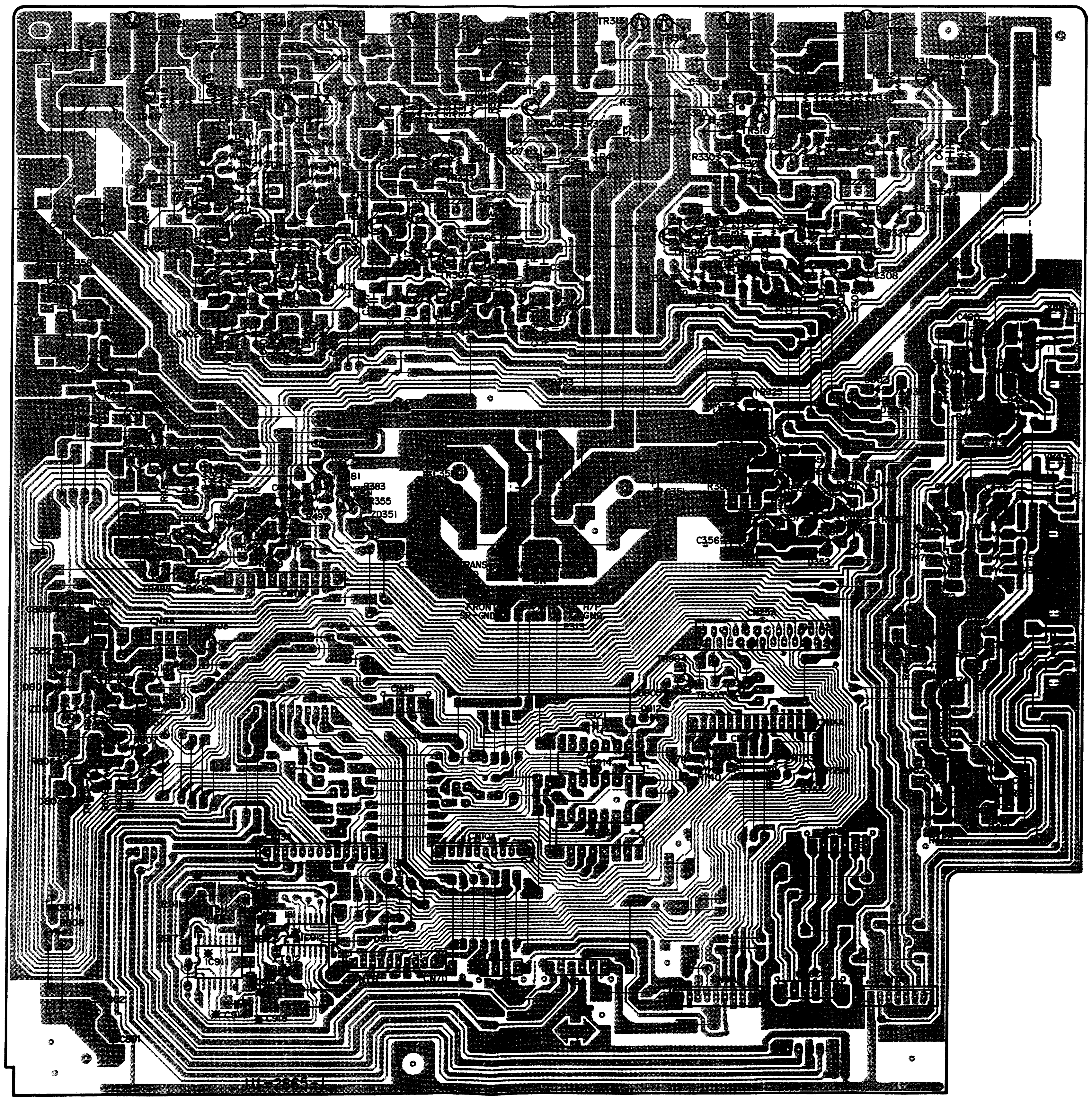
A
B
C
D
E
TR205
TR206
R209
C209
C208
R207
C207
C202
C223
R219
IC
48
49
32
CN101
JK101
PHONO
1U-2867-1

1U-2865 D MAIN AMP. P.W.B. UNIT ASS'Y

IC911, 912	○
D911	○
C428	○
C911~915	○
C918, 919	○
XT911, 912	○

Note:
O : Used
X : Not used


1
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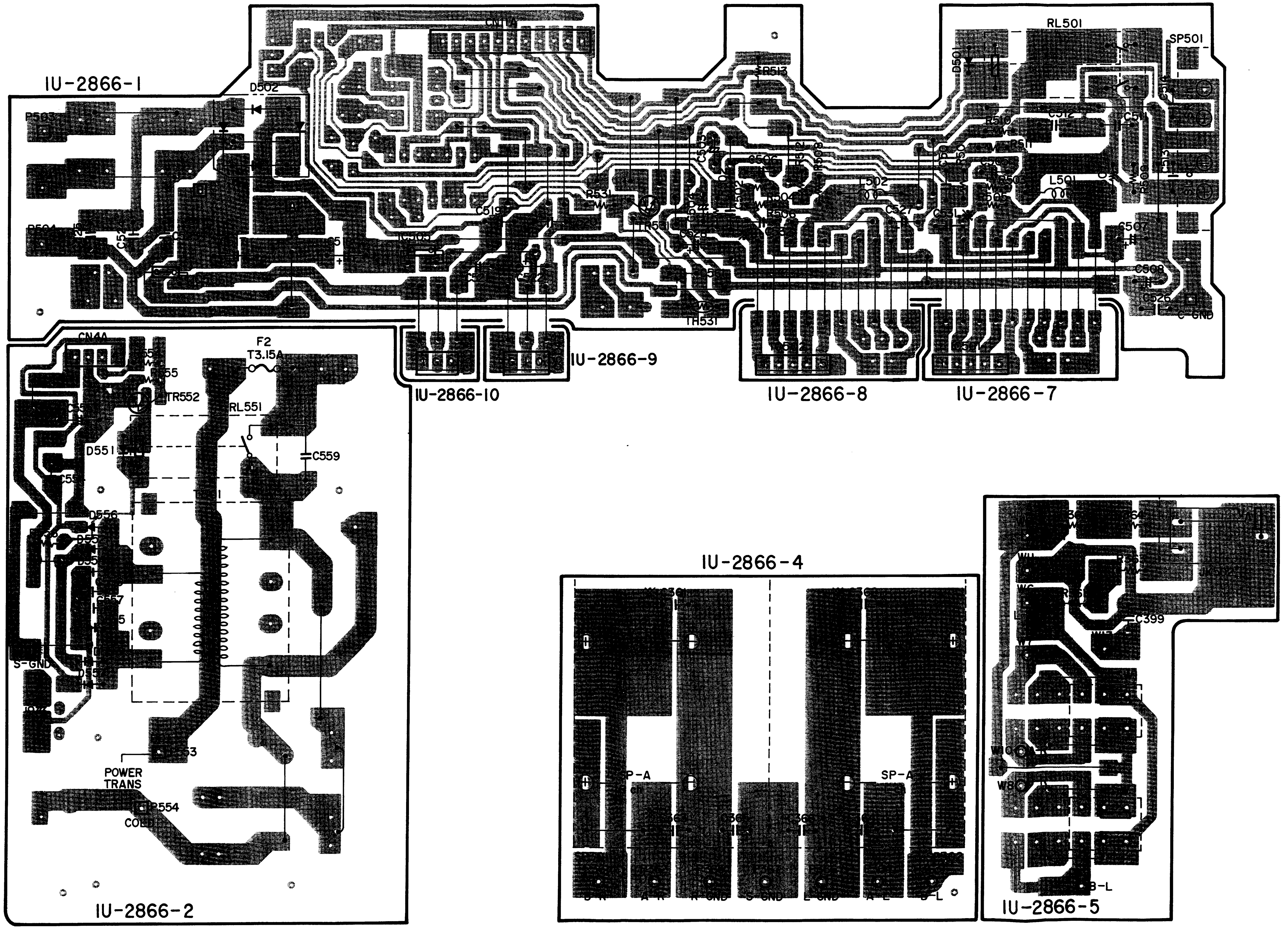
A
B
C
D
E
R383
R355
ZD351
C356
IC911
1U-2865-1

1U-2866 A REAR AMP. P.W.B. UNIT ASS'Y

1U-2866 A

R557	X
C361~364	O
C513, 514	O
C531, 532	O
F011, 012	X
F001	X
AC outlet	X

Note:
O : Used
X : Not used


1
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7
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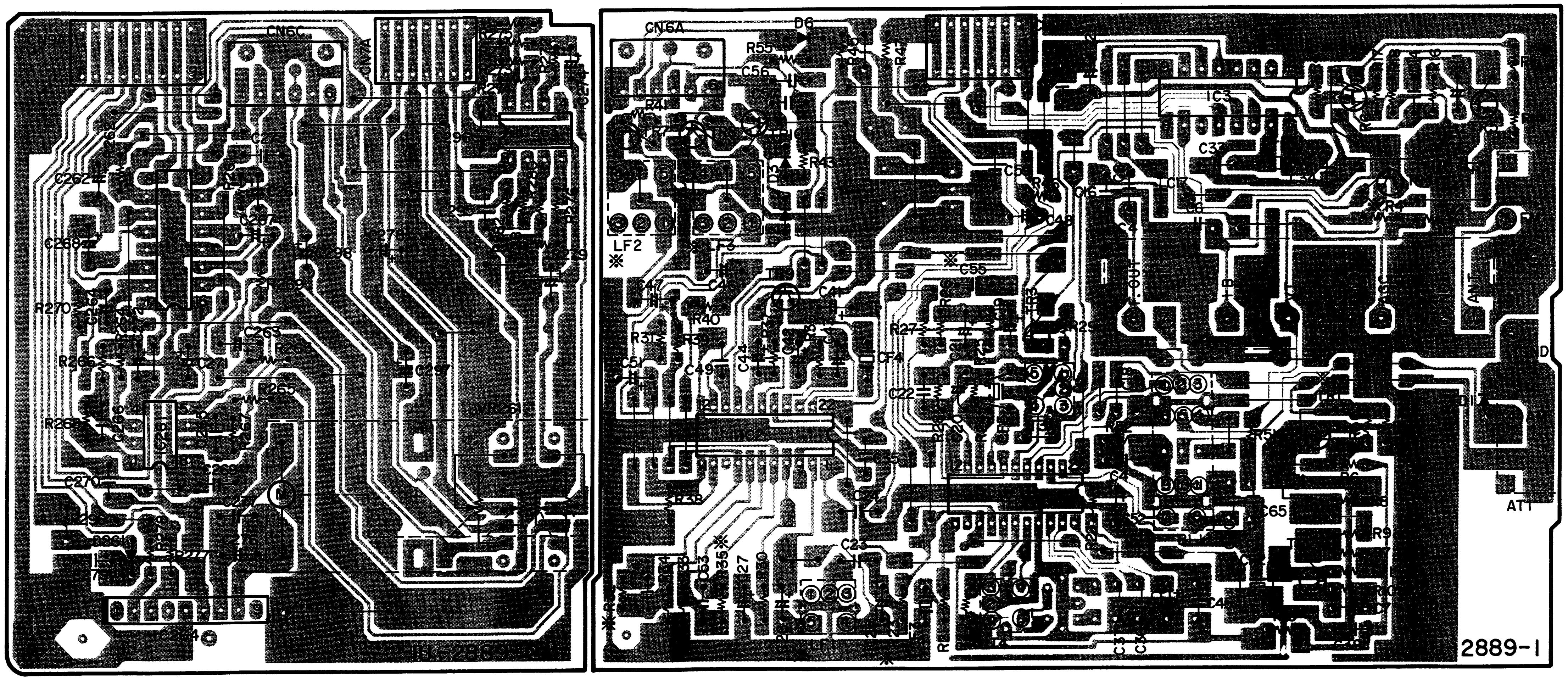
A
B
C
D
E
IU-2866-1
CN11A
D502
P503
P504
R513
D501
RL501
SP501
C512
C514
R511
L501
L502
R531
TR531
TH531
C519
C527
C507
C508
C526
C-GND
IU-2866-10
IU-2866-9
IU-2866-8
IU-2866-7
CN4A
F2
T3.15A
TR552
RL551
D551
C559
D556
S-GND
POWER
TRANS
P554
COLD
IU-2866-2
IU-2866-4
SP-A
IU-2866-5
C399
W8
B-L

1U-2889 D TUNER AND VOLUME P.W.B. UNIT ASS'Y

TR001	○
R023	○
R032	○
R035	○
C055	○
LF001	○
LF002	○
LF003	○

Note:
O : Used
X : Not used


1
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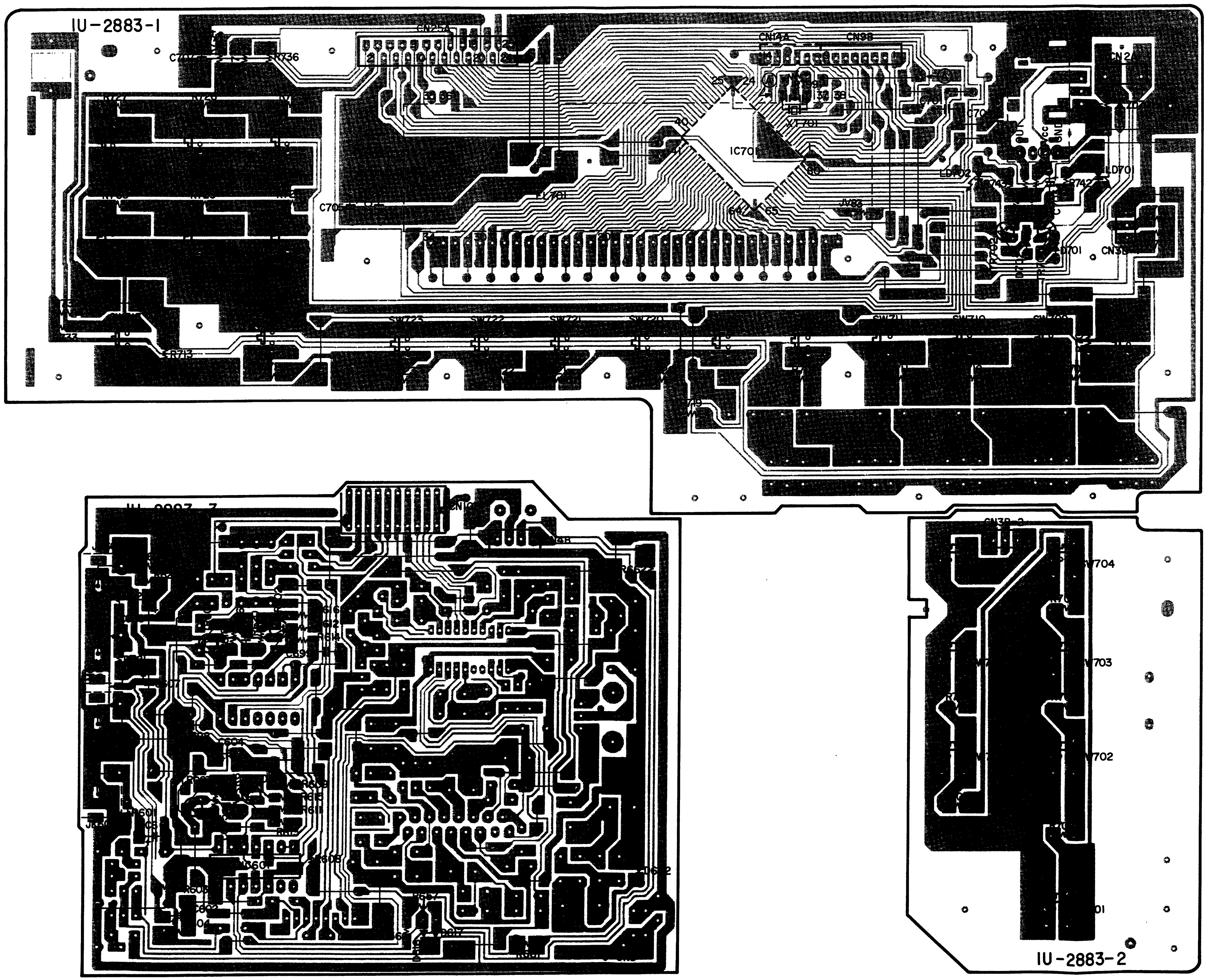
7
8
A
B
C
D
E
CN6C
CN6A
D6
R55
C56
R41
LF2
※
IC3
C37
C55
R40
R31
C51
C49
C44
R27
C74
C22
R29
C65
R9
ATT
C23
R38
C262
C268
R270
R265
R268
C270
C265
C297
C298
1U-2889
2889-1

1U-2883 E FLD AND VIDEO P.W.B. UNIT ASS'Y


1
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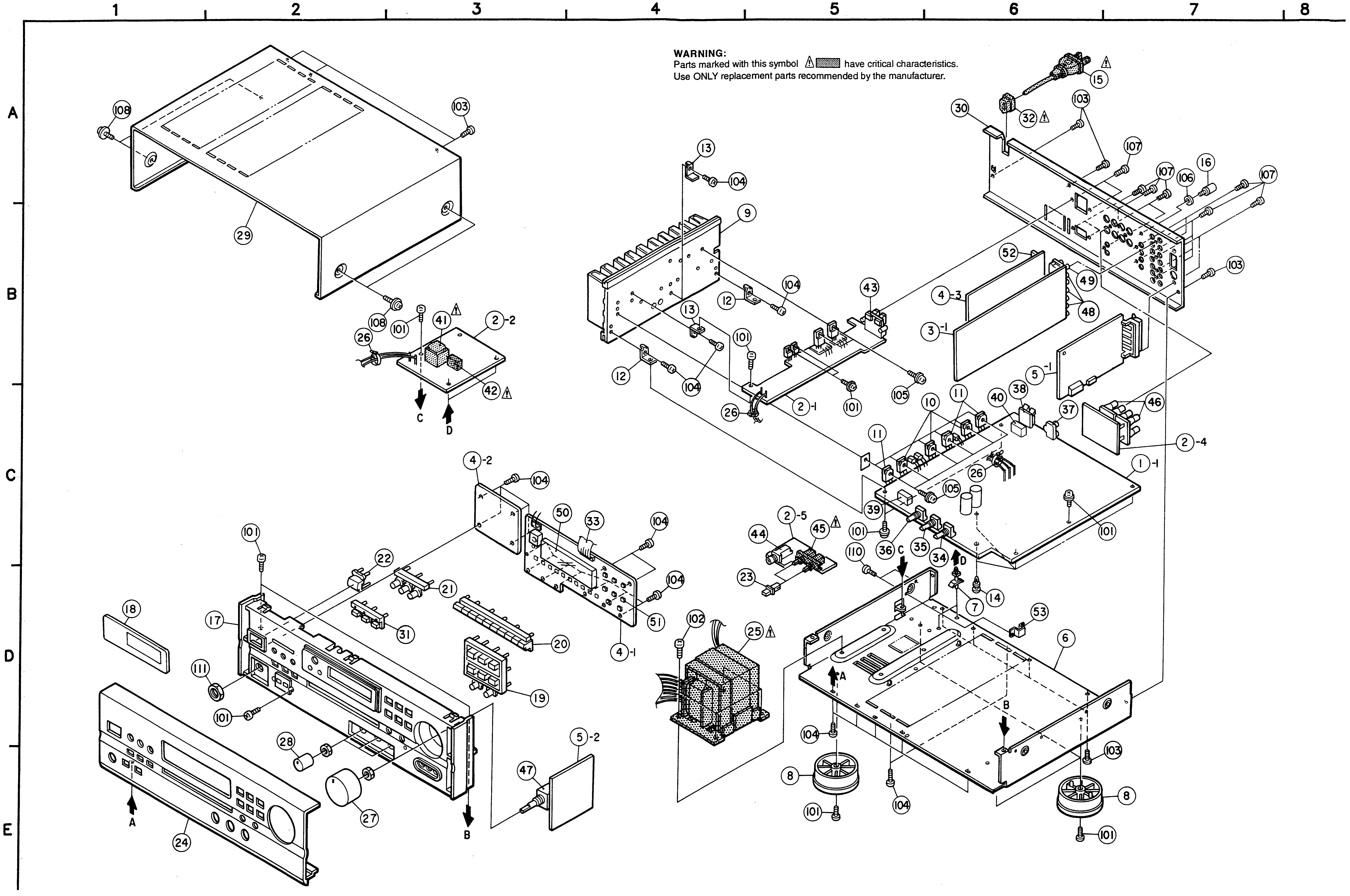
5
6
7
8
A
B
C
D
E
IU-2883-1
IU-2883-2
CN254
CN14A
CN98
CN2A
IC701
X701
LD701
LD702
D701
CN3B
C705
C702
R736
R713
SW723
SW722
SW721
SW720
SW711
SW710
SW709
SW704
SW703
SW702
CN3B-2
R601
C604
R606
R605
R617
R612
R601

EXPLODED VIEW


1
2
3
4
5
6
7
8
A
B
C
D
E
108
103
29
108
101
41 ⚠
2-2
26
42 ⚠
C
D
13
104
9
12
104
13
101
12
104
26
2-1
101
105
43
30
32 ⚠
15 ⚠
103
107
107
106
16
107
103
52
4-3
49
48
3-1
5-1
11
10
40
38
37
46
2-4
11
1-1
26
105
39
101
36
C
35
34
D
110
101
4-2
104
50
33
104
104
51
4-1
101
22
21
31
20
19
18
17
111
101
28
27
24
A
B
5-2
47
102
25 ⚠
2-5
44
45 ⚠
23
7
14
53
6
A
B
104
8
101
104
103
8
101

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

PARTS LIST OF EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 1	1U- 2865 D	Main Amp. P.W.B. Unit Ass'y		1
1-1	—	Main Amp. P.W.B. Unit		
◉ 2	1U- 2866 A	Rear Amp. P.W.B. Unit Ass'y		1
2-1	—	Rear Amp. P.W.B. Unit		
2-2	—	Power Supply P.W.B. Unit		
2-4	—	Front SP. P.W.B. Unit		
2-5	—	H/P and SP. P.W.B. Unit		
◉ 3	1U- 2867 A	Input and Surround P.W.B. Unit Ass'y		1
3-1	—	Input and Surround P.W.B. Unit		
◉ 4	1U- 2883 E	FLD and Video P.W.B. Unit Ass'y		1
4-1	—	FLD P.W.B. Unit		
4-2	—	Tact S.W P.W.B. Unit		
4-3	—	Video P.W.B. Unit		
◉ 5	1U- 2889 D	Tuner and Volume P.W.B. Unit Ass'y		1
5-1	—	Tuner P.W.B. Unit		
5-2	—	Volume P.W.B. Unit		
◉ 6	411 1334 108	Main Chassis		1
◉ 7	443 0518 016	P.W.B. Holder		2
8	104 0282 007	*Foot Ass'y		4
9	417 0513 009	*Power Radiator		1
10	273 0389 002	2SC3855(O/P/Y)(Z)		3
11	271 0240 006	2SA1491(O/P/Y)(Z)		3
◉ 12	412 4000 005	*P.W.B. Bracket(A)		2
◉ 13	412 3766 007	*L Bracket		2
14	412 2814 002	Card Spacer (L=8)		4
⚠ 15	206 2063 009	AC Cord With Plug	Europe Model	1
⚠ 15	206 2132 008	AC Cord With Plug	U.K. Model	1
16	205 0071 016	Terminal Ass'y		1
◉ 17	146 1574 103	Inner Panel		1
◉ 18	143 0942 009	Window		1
19	113 1753 005	Tact Knob (A)		1
20	113 1692 001	*Function Knob		1
21	113 1743 002	Tact Knob (3 Key)		1
22	113 1636 106	*Push Knob (P)		1
23	113 1558 006	Push Knob (KAKU)		2
◉ 24	144 2451 012	Front Panel		1
⚠ 25	233 6178 002	Power Trans		1
26	445 8004 007	Wire Clamper		5
27	112 0761 008	*Volume Knob		1
28	112 0762 007	*Knob		3
◉ 29	102 0565 003	Top Cover		1
30	105 1167 111	Back Panel		1
★ 31	113 1759 009	Tact Knob (13×5)-3		1
⚠ 32	445 0056 008	Cord Bush		1
33	009 0105 012	25P FFC Cable		1
34	211 0798 103	Variable Resistor 100kohm	VR451	1
35	211 0797 117	Variable Resistor 30kohm	VR452	1
36	211 0797 133	Variable RESISTOR 10kohm	VR453	1
37	204 8509 011	2P Pin Jack (C-GND)	JK301	1
38	205 0971 006	2P Push Terminal	SP003	1
39	214 0129 001	Relay (DH2TU)	RL481	1
40	214 0187 001	Relay (DH24D2-OS(M)-2)	RL482	1
⚠ 41	233 6058 012	Power Trans (Mini)		1
⚠ 42	214 0188 000	Relay (VS-12MBNR-SM2)(TV-8)	RL551	1
43	205 0972 005	4P Push Terminal		1
44	204 8503 004	:Headphone Jack		1
⚠ 45	212 4778 009	2P Push Switch	SW001	1
46	205 0952 009	4P Speaker Terminal		2
47	211 0858 001	Variable Resistor 100kohm	VR261	1
48	204 8497 000	4P Pin Jack (GND)(K)	JK101~103	3
49	204 8509 008	2P Pin Jack (C-GND)	JK104	1
50	393 4155 002	FLD (FIP14AM7R)	FL701	1
51	212 4788 002	Tact Switch	SW701~704, 708~713, 719~730	25
52	204 8468 000	2P Pin Jack	JK601,602	2
53	412 2955 107	Side Bracket		1
★	513 2236 006	Label		

SCRWES

Ref. No.	Part No.	Part Name	Remarks	Q'ty
101	473 7002 018	Screw 3×8 (S)		14
102	473 7004 016	Screw 4×6 (S)		4
103	473 7015 018	Screw 3×8 (S) BK		10
104	473 7500 044	Screw 3×8 (P) BK		33
105	473 8007 009	Screw 3×12 cup		8
106	477 0018 001	Washer(P-87)		1
107	477 0064 107	Fixing Screw		17
108	477 0263 005	3P Swelling Screw		4
109	477 0096 007	Push Rivet	Europe Model	8
110	473 7015 005	Screw 3×6 (S)		2
111	475 6124 003	12 Nut		1

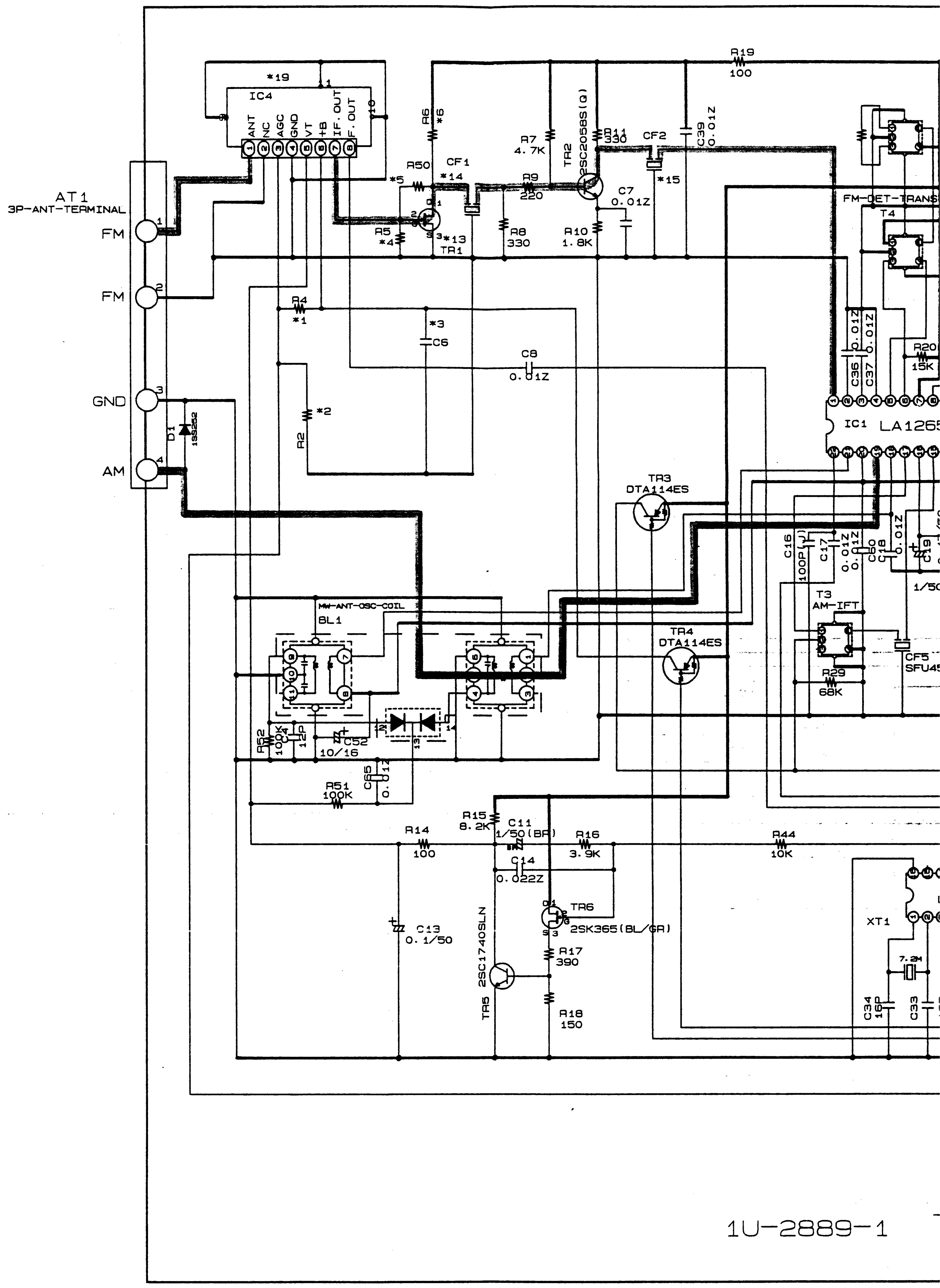
PACKING & ACCESSORIES

Ref. No.	Part No.	Part Name	Remarks	Q'ty
	231 0922 009	AM Lope Antenne		1
	394 0038 003	Battery (GER6M)		2
	395 0023 008	:*FM Antenne Ass'y		1
	399 0292 006	Remoto Control Unit	RC195	1
	501 1887 013	Carton Case		1
	503 1190 007	Cushion		2
	504 0092 086	Stylen Paper	(700×600×T1)	1
	504 0168 004	AC Protect Sheet	U.K. Model	1
	505 0075 006	Cabinet Cover	(750×350)	1
	505 8006 019	Envelope		1
	511 2800 009	Instructions Manual		1
	513 1349 004	Thermal Carbon Film		1
	513 1389 006	Control Card Base		1
	515 0671 229	S.S. List		1
	513 2446 003	China Label (E)	Europe Model	
	513 2447 002	China Label (F)	Europe Model	

MEMO:

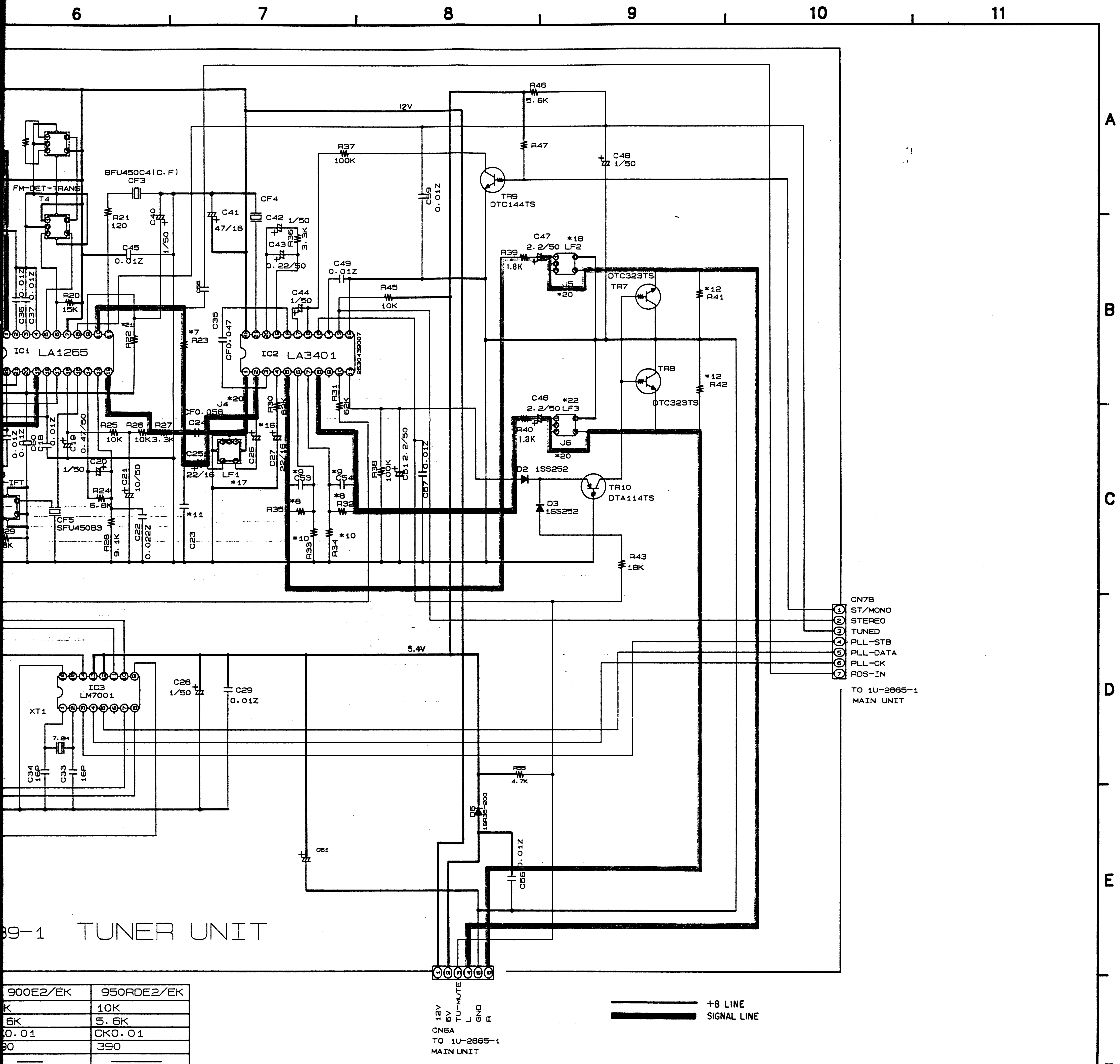
SCHEMATIC DIAGRAM

1 2 3 4 5 6



AT1
3P-ANT-TERMINAL
FM
FM
GND
AM
D1
1SS252
IC4
*19
ANT
NC
AGC
GND
VT
+B
IF.OUT
F.OUT
R50
*5
CF1
*14
R5
*4
*13
TR1
R6
*6
R7
4.7K
R9
220
R8
330
TR2
2SC2058S(Q)
R11
330
CF2
*15
C7
0.01Z
R10
1.8K
R19
100
C39
0.01Z
R4
*1
*3
C6
C8
0.01Z
R2
*2
TR3
DTA114ES
TR4
DTA114ES
MW-ANT-OSC-COIL
BL1
R52
100K
C4
12P
C52
10/16
R51
100K
C65
0.01Z
R14
100
R15
8.2K
C11
1/50(BP)
R16
3.9K
C14
0.022Z
TR6
2SK365(BL/GR)
R17
390
R18
150
TR5
2SC1740SLN
C13
0.1/50
R44
10K
FM-DET-TRANS
T4
C36
0.01Z
C37
0.01Z
R20
15K
IC1
LA1265
C16
100P
C17
0.01Z
C18
0.01Z
C50
0.01Z
C19
1/50
T3
AM-IFT
CF5
SFU45
R29
68K
XT1
7.2M
C34
15P
C33
1U-2889-1

		900E3	900E1	900E2/EK
*1	R4	—	—	10K
2	R2	—	—	5.6K
3	C6	—	—	CK0.01
4	R5	1K	1K	390
5	R50	100	100	—
6	R6	—	—	330
7	R23	JUMPER	JUMPER	1.6K
8	R32.35	100K	100K	160K
9	C53.54	CC750P	CC750P	CC330P
10	R33.34	120K	120K	200K
11	C23	CC100P	CC100P	—
12	R41.42	6.8K	6.8K	4.7K
13	TR1	—	—	2SK161
14	CF1	CFSK107M1-A	CFSK107M1-A	CFSK107M2-A
15	CF2	CFSK107M2-A	CFSK107M2-A	CFSK107M2-A
16	C26	—	—	22/16
17	LF1	—	—	ANTI-BIRDIE FILTER
18	LF2.3	—	—	LPF
19	IC4	F/E 2160102008	F/E 2160102008	F/E 2160079005
20	J4.5.6	JUMPER	JUMPER	—
21	R22	18K	39K	39K
22	LF4	—	—	2329010009
23	C55	—	—	CC120P


6
7
8
9
10
11
A
B
C
D
E
F
G
H
FM-DET-TRANS
T4
BFU450C4(C.F)
CF3
R21
120
C40
1/50
C45
0.01Z
C41
47/16
CF4
C42
1/50
C43
R36
3.3K
0.22/50
C36
C37
0.01Z
0.01Z
R20
15K
IC1
LA1265
R22
*21
*7
R23
C35
CF0.047
IC2
LA3401
2030439007
C44
1/50
C49
0.01Z
R45
10K
R37
100K
12V
C9
0.01Z
R46
5.6K
R47
TR9
DTC144TS
C48
1/50
C47
2.2/50
*18
LF2
R39
1.8K
J5
*20
DTC323TS
TR7
*12
R41
TR8
*12
R42
DTC323TS
C46
2.2/50
*22
LF3
R40
1.8K
J6
*20
D2
1SS252
TR10
DTA114TS
D3
1SS252
R43
18K
J4
*20
CF0.056
C24
*16
C25
22/16
LF1
*17
C26
C27
22/16
R30
62K
R31
62K
R38
10K
C51
2.2/50
C57
0.01Z
*9
C53
*9
C54
*8
R32
*8
R35
*10
R33
R34
*10
C19
0.01Z
C18
0.47/50
C50
0.01Z
0.01Z
R25
10K
R26
10K
R27
3.3K
C20
1/50
C21
10/50
R24
6.8K
CF5
SFU450B3
R28
9.1K
C22
0.022Z
C23
*11
IFT
CN7B
① ST/MONO
② STEREO
③ TUNED
④ PLL-STB
⑤ PLL-DATA
⑥ PLL-CK
⑦ RDS-IN
TO 1U-2865-1
MAIN UNIT
5.4V
IC3
LM7001
XT1
7.2M
C34
16P
C33
16P
C28
1/50
C29
0.01Z
R55
4.7K
D5
1SR35-200
C61
C56
0.01Z
39-1 TUNER UNIT
12V
5V
TU-MUTE
L
GND
R
CN6A
TO 1U-2865-1
MAIN UNIT
+B LINE
SIGNAL LINE

900E2/EK	950RDE2/EK
K	10K
6K	5.6K
O.01	CKO.01
90	390
——	——
30	330
6K	1.2K
OK	100K
330P	CC330P
OK	200K
——	——
7K	4.7K
K161	2SK161
SK107M2-A	CFSK107M2-A
SK107M2-A	CFSK107M2-A
/16	22/16
TI-BIRDIE LTER	ANTI-BIRDIE FILTER
F	LPF
/E 160079005	F/E 2160065006
——	——
9K	39K
29010009	2329010009
CC120P	CC120P

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

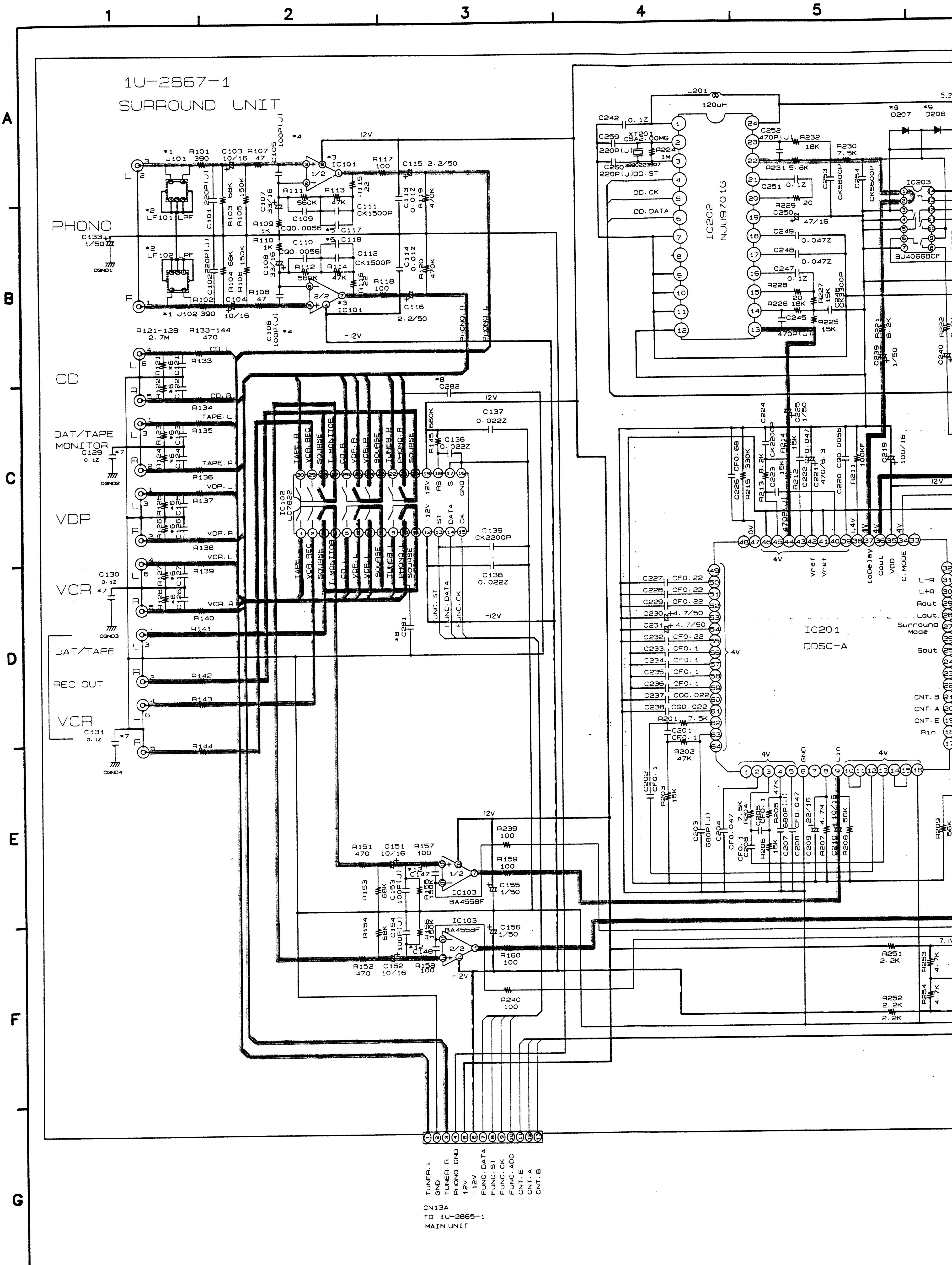
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM

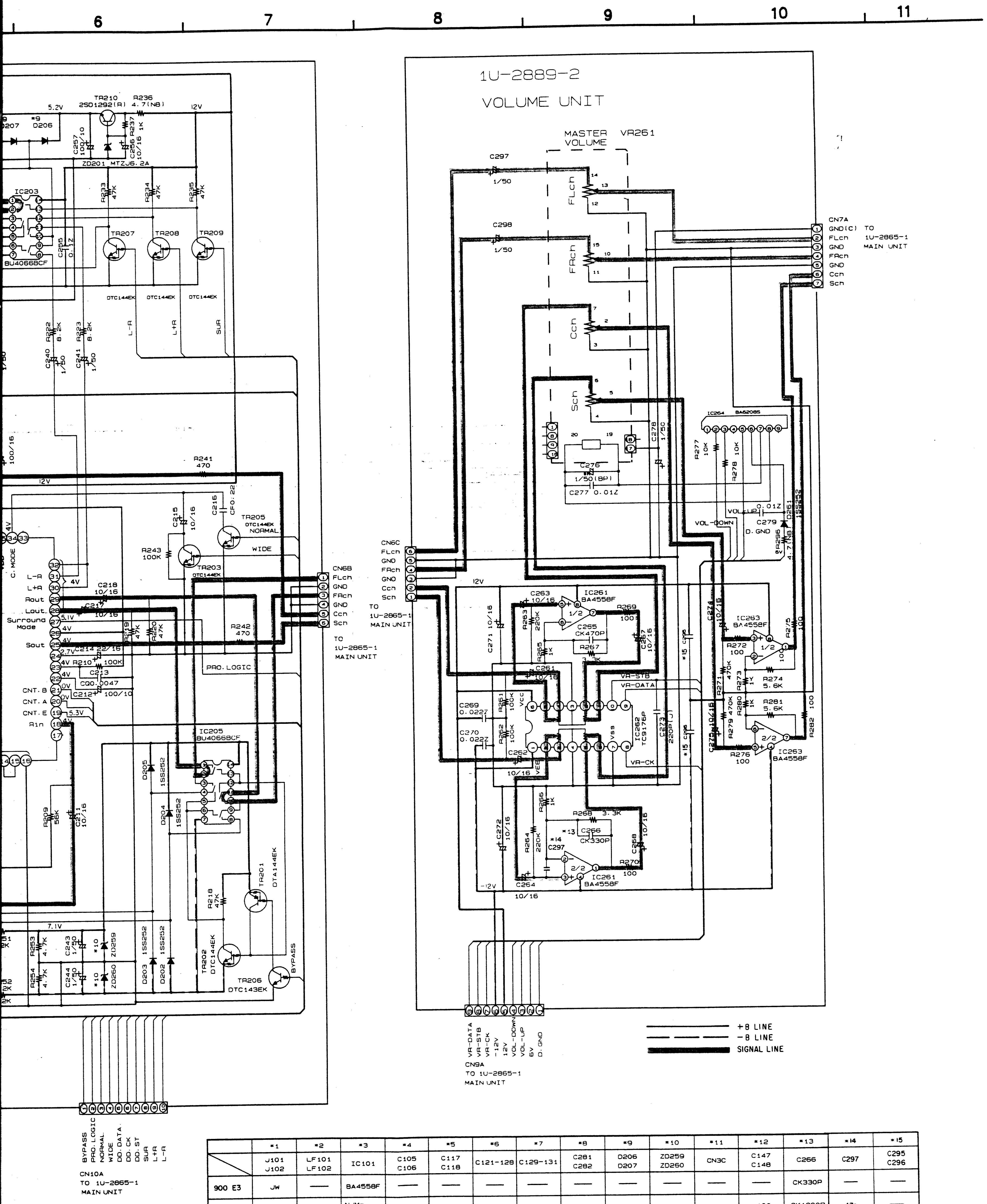

1
2
3
4
5
A
B
C
D
E
F
G
1U-2867-1
SURROUND UNIT
PHONO
CD
DAT/TAPE MONITOR
VDP
VCR
DAT/TAPE REC OUT
VCR
IC101
IC102 LC7822
IC103 BA4558F
IC201 DDSC-A
IC202 NJU9701G
IC203 BU4066BCF
L201 120uH
XT201
12V
-12V
CN13A TO 1U-2865-1 MAIN UNIT
TUNER. L
GND
TUNER. R
PHONO. GND
12V
-12V
FUNC. DATA
FUNC. ST
FUNC. CK
FUNC. ADD
CNT. E
CNT. A
CNT. B

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

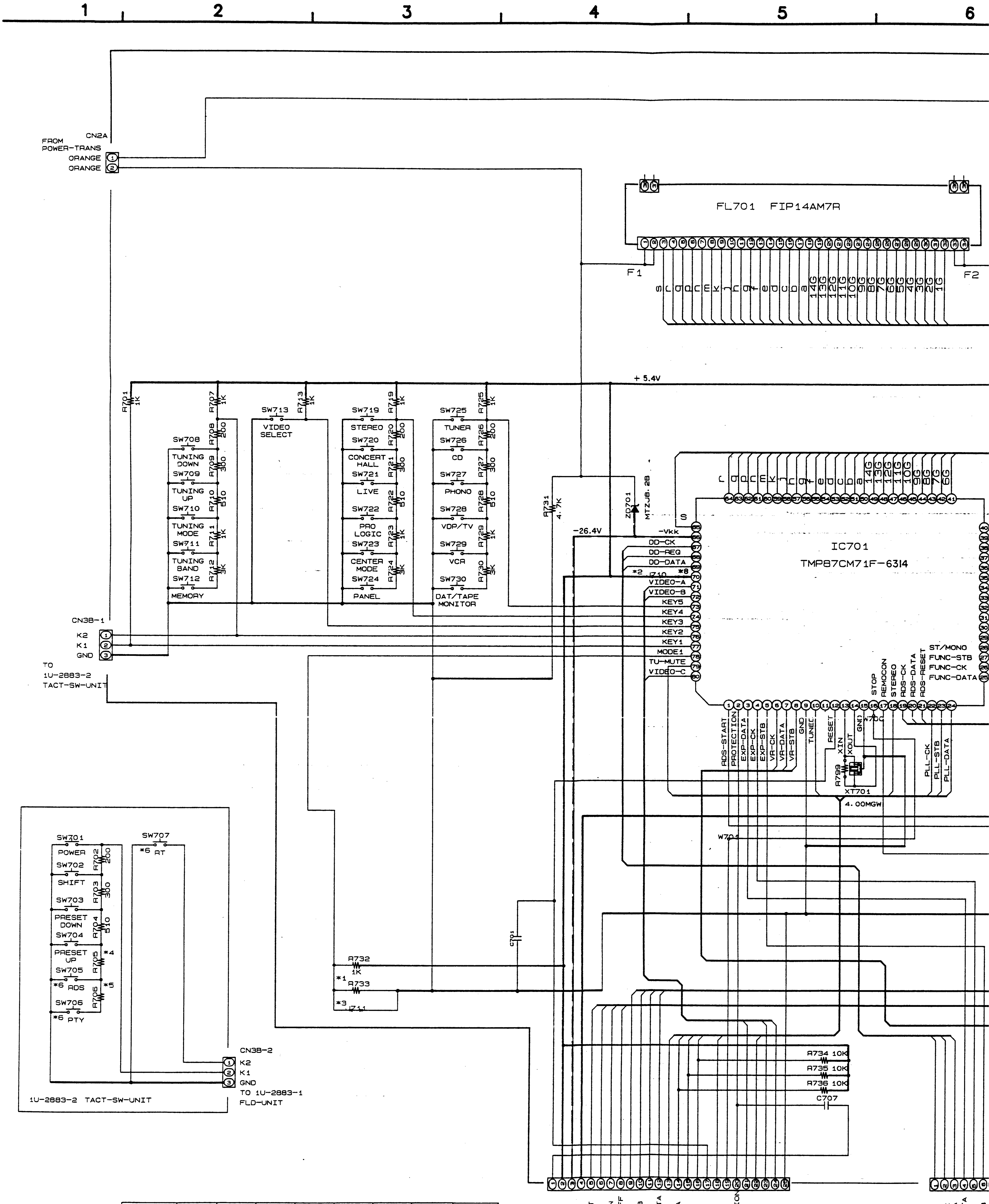
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

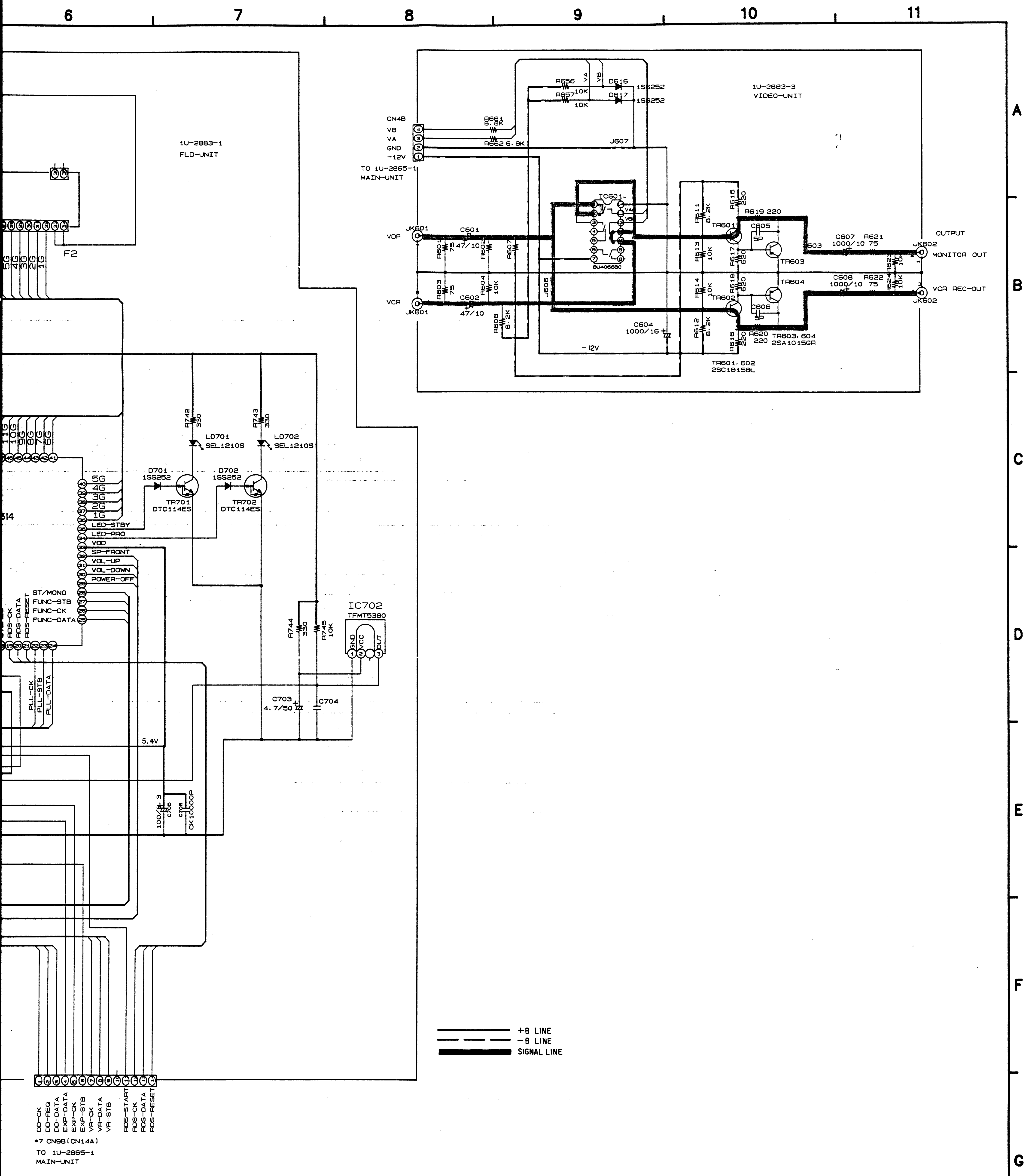

6
7
8
9
10
11
1U-2889-2
VOLUME UNIT
MASTER VOLUME
VR261
FLch
FRch
Cch
Sch
C297
1/50
C298
1/50
CN7A
GND(C)
FLch
GND
FRch
GND
Cch
Sch
TO 1U-2865-1 MAIN UNIT
IC264 BA6208S
R277 10K
R278 10K
C278 1/50
C276 1/50(BP)
C277 0.01Z
VOL-UP
VOL-DOWN
C279 0.01Z
D. GND
D261 1SS252
R296 4.7(NB)
6V
CN6C
FLch
GND
FRch
GND
Cch
Sch
TO 1U-2865-1 MAIN UNIT
12V
C263 10/16
IC261 BA4558F
R263 220K
R269 100
C265 CK470P
R267 3.3K
C267 10/16
C271 10/16
R265
C261 10/16
C269 0.022Z
C270 0.022Z
R261 100K
R262 100K
VCC
VEE
VSS
IC262 TC9176P
C273 220P(J)
VR-STB
VR-DATA
VR-CK
C262 10/16
R266 1K
R268 3.3K
C266 CK330P
C272 10/16
R264 220K
C297
C268 10/16
R270 100
C264 10/16
IC261 BA4558F
-12V
*13
*14
*15
C295
C296
C274 10/16
C275 10/16
IC263 BA4558F
R272 100
R275 100
R271 470K
R273 1K
R274 5.6K
R279 470K
R280 1K
R281 5.6K
R276 100
R282 100
VR-DATA
VR-STB
VR-CK
-12V
12V
VOL-DOWN
VOL-UP
6V
D. GND
CN9A
TO 1U-2865-1
MAIN UNIT
+B LINE
-B LINE
SIGNAL LINE
TR210 2SD1292(R)
R236 4.7(NB)
5.2V
12V
D207
*9 D206
C257 100/10
C256 10/16
R237 1K
ZD201 MTZJ6.2A
IC203
BU4066BCF
C255 0.1Z
R233 47K
R234 47K
R235 47K
TR207
TR208
TR209
DTC144EK
L-R
L+R
SUR
R222 8.2K
R223 8.2K
C240 1/50
C241 1/50
R241 470
12V
C215 10/16
C216 CFO.22
TR205 DTC144EK
NORMAL
WIDE
R243 100K
TR203 DTC144EK
CN6B
FLch
GND
FRch
GND
Cch
Sch
TO 1U-2865-1 MAIN UNIT
C. MODE
L-R
L+R
Rout
Lout
Surround Mode
Sout
CNT. B
CNT. A
CNT. E
Rin
4V
C218 10/16
C217 10/16
5.1V
2.7V
C214 22/16
R219 47K
R220 47K
R242 470
R210 100K
C213 CQ0.0047
C212 100/10
5.3V
PRO. LOGIC
IC205 BU4066BCF
D205 1SS252
D204 1SS252
R209 56K
C211 10/16
TR201 DTA144EK
R218 47K
7.1V
R253 4.7K
R254 4.7K
C243 1/50
C244 1/50
*10 ZD259
*10 ZD260
D203 1SS252
D202 1SS252
TR202 DTC144EK
TR206 DTC143EK
BYPASS
BYPASS
PRO. LOGIC
NORMAL
WIDE
DD. DATA
DD. CK
DD. ST
SUR
L+R
L-R
CN10A
TO 1U-2865-1
MAIN UNIT

	*1	*2	*3	*4	*5	*6	*7	*8	*9	*10	*11	*12	*13	*14	*15
	J101 J102	LF101 LF102	IC101	C105 C106	C117 C118	C121-128	C129-131	C281 C282	D206 D207	ZD259 ZD260	CN3C	C147 C148	C266	C297	C295 C296
900 E3	JW	—	BA4558F	—	—	—	—	—	—	—	—	—	CK330P	—	—
900 E2/EK/E1	4.7K	FTZ-COIL	NJM-2068MD	100P	—	CC56p	—	CQ0.001	—	—	—	100p	CK1200P	47p	—
950RD E2/EK	4.7K	FTZ-COIL	NJM-2068MD	100P	—	CC56p	—	CQ0.001	—	—	—	100p	CK1200P	47p	—

SCHEMATIC DIAGRAM


1
2
3
4
5
6
FROM POWER-TRANS
CN2A
ORANGE
ORANGE
FL701 FIP14AM7R
F1
F2
+ 5.4V
-26.4V
R701 1K
R707 1K
R708 200
R709 300
R710 510
R711 1K
R712 3K
SW708 TUNING DOWN
SW709 TUNING UP
SW710 TUNING MODE
SW711 TUNING BAND
SW712 MEMORY
SW713 VIDEO SELECT
R713 1K
SW719 STEREO
SW720 CONCERT HALL
SW721 LIVE
SW722 PRO LOGIC
SW723 CENTER MODE
SW724 PANEL
R719 1K
R720 200
R721 300
R722 510
R723 1K
R724 3K
SW725 TUNER
SW726 CD
SW727 PHONO
SW728 VDP/TV
SW729 VCR
SW730 DAT/TAPE MONITOR
R725 1K
R726 200
R727 300
R728 510
R729 1K
R730 3K
R731 4.7K
ZD701 MTZJ8.2B
IC701
TMP87CM71F-6314
-Vkk
DD-CK
DD-REQ
DD-DATA
*2 J710
*8
VIDEO-A
VIDEO-B
KEY5
KEY4
KEY3
KEY2
KEY1
MODE1
TU-MUTE
VIDEO-C
ST/MONO
FUNC-STB
FUNC-CK
FUNC-DATA
STOP
REMOCON
STEREO
RDS-CK
RDS-DATA
RDS-RESET
RDS-START
PROTECTION
EXP-DATA
EXP-CK
EXP-STB
VR-CK
VR-DATA
VR-STB
GND
TUNED
RESET
XIN
XOUT
PLL-CK
PLL-STB
PLL-DATA
R799
XT701
4.00MGW
W701
CN38-1
K2
K1
GND
TO 1U-2883-2 TACT-SW-UNIT
SW701 POWER
SW702 SHIFT
SW703 PRESET DOWN
SW704 PRESET UP
SW705 *6 RDS
SW706 *6 PTY
SW707 *6 RT
R702 200
R703 300
R704 510
R705 *4
R706 *5
C701
R732 1K
*1 R733
*3 J711
R734 10K
R735 10K
R736 10K
C707
CN38-2
K2
K1
GND
TO 1U-2883-1 FLD-UNIT
1U-2883-2 TACT-SW-UNIT
5V-S
5V
-Vkk
VDD
SP-FRONT
VOL-UP
VOL-DOWN
POWER-OFF
ST/MONO
FUNC-STB
FUNC-CK
FUNC-DATA
STEREO
PLL-DATA
PLL-STB
PLL-CK
RESET
TUNED
STOP
PROTECTION
VIDEO-C
TU-MUTE
VIDEO-A
VIDEO-B
GND
CN25A
TO 1U-2865-1 MAIN-UNIT
DD-CK
DD-REQ
DD-DATA
EXP-DATA
EXP-CK
EXP-STB
*7 CN9B (CN14
TO 1U-2865-
MAIN-UNIT

	*1 R733	*2-RDS J710	*3 J711	*4 R705	*5 R706	*6 SW705-7	*7 CN9B	*8 JV83
900E3	200ohm	–	JUMPER	–	–	–	o	–
900E2/EK /E1	200ohm	–	–	–	–	–	o	–
900E1T	200ohm	–	cut	–	–	–	o	–
950RD E2/EK	200ohm	JUMPER	–	1K	3K	SWITCH	CN14A	1K ohm


6
7
8
9
10
11
A
B
C
D
E
F
G
1U-2883-1
FLD-UNIT
F2
1U-2883-3
VIDEO-UNIT
CN48
VB
VA
GND
-12V
TO 1U-2865-1 MAIN-UNIT
R656
R657 10K
10K
D616 1SS252
D617 1SS252
R661 6.8K
R662 6.8K
J607
IC601
BU4066BC
JK601
VDP
VCR
C601 47/10
C602 47/10
R601 75
R603 75
R602
R604 10K
R607
R608 8.2K
J506
R611 8.2K
R613 10K
R614 10K
R612 8.2K
R615 220
R616 220
R617 620
R618 620
R619 220
R620 220
TR601
TR602
TR603
TR604
C605 5P
C606 5P
C604 1000/16
-12V
C607 1000/10
R621 75
C608 1000/10
R622 75
R623 10K
R624 10K
JK602
OUTPUT
MONITOR OUT
VCR REC-OUT
TR603, 604 2SA1015GR
TR601, 602 2SC1815BL
R742 330
R743 330
LD701 SEL1210S
LD702 SEL1210S
D701 1SS252
D702 1SS252
TR701 DTC114ES
TR702 DTC114ES
5G
4G
3G
2G
1G
11G
10G
9G
8G
7G
6G
LED-STBY
LED-PRO
VDD
SP-FRONT
VOL-UP
VOL-DOWN
POWER-OFF
ST/MONO
FUNC-STB
FUNC-CK
FUNC-DATA
RDS-CK
RDS-DATA
RDS-RESET
PLL-CK
PLL-STB
PLL-DATA
IC702
TFMT5380
GND
VCC
OUT
R744 330
R745 10K
C703 4.7/50
C704
5.4V
C705 100/6.3
C706 CK1000P
314
+B LINE
-B LINE
SIGNAL LINE
DD-CK
DD-REQ
DD-DATA
EXP-DATA
EXP-CK
EXP-STB
VR-CK
VR-DATA
VR-STB
RDS-START
RDS-CK
RDS-DATA
RDS-RESET
*7 CN9B (CN14A)
TO 1U-2865-1
MAIN-UNIT

WARNING:
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CAUTION:
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ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

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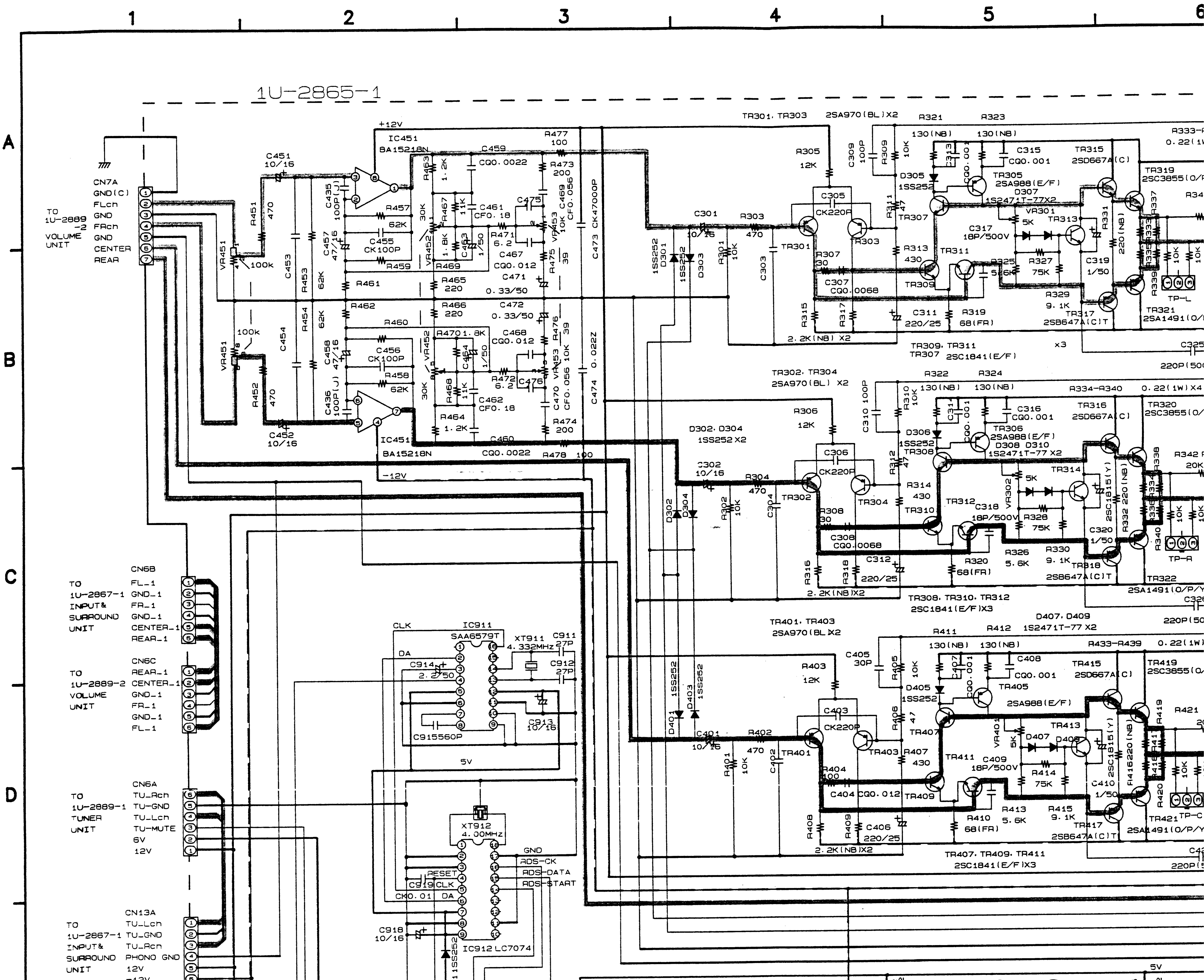
SCHEMATIC DIAGRAM


1
2
3
4
5
A
B
C
D
E
F
G
H
1U-2865-1
CN7A
GND(C)
FLch
GND
FRch
GND
CENTER
REAR
TO 1U-2889-2 VOLUME UNIT
IC451 BA15218N
+12V
-12V
CN6B
FL_1
GND_1
FR_1
GND_1
CENTER_1
REAR_1
TO 1U-2867-1 INPUT& SURROUND UNIT
CN6C
REAR_1
CENTER_1
GND_1
FR_1
GND_1
FL_1
TO 1U-2889-2 VOLUME UNIT
CN6A
TU_Rch
TU-GND
TU_Lch
TU-MUTE
6V
12V
TO 1U-2889-1 TUNER UNIT
CN13A
TU_Lch
TU_GND
TU_Rch
PHONO GND
12V
-12V
FUNC-DATA
FUNC-STB
FUNC-CK
CNT_E
CNT_A
CNT_B
TO 1U-2867-1 INPUT& SURROUND UNIT
CN9A
VR-DATA
VR-STB
VR-CK
-12V
12V
VOL-DOWN
VOL-UP
6V
D. GND
TO 1U-2889-2 VOLUME UNIT
CN7B
ST/MONO
STEREO
TUNED
PLL-STB
PLL-DATA
PLL-CK
RDS IF
TO 1U-2889-1 TUNER UNIT
IC911 SAA6579T
XT911 4.332MHz
XT912 4.00MHz
IC912 LC7074
RDS-CK
RDS-DATA
RDS-START
IC913 UPD4094BC
IC914 UPD4094BC
TR301, TR303 2SA970(BL)X2
TR302, TR304 2SA970(BL) X2
TR401, TR403 2SA970(BL)X2
TR309, TR311 TR307 2SC1841(E/F)
TR308, TR310, TR312 2SC1841(E/F)X3
TR407, TR409, TR411 2SC1841(E/F)X3
DTA143ES VIDEO-A
DTA143ES VIDEO-B
5V-S
CN25A TO 1U-2883-1 FLD UNIT
5V-S
5V
-VKK
VDD
SP-FRONT
VOL-UP
VOL-DOWN
POWER-OFF
ST/MONO
FUNC-STB
FUNC-CK
FUNC-DATA
STEREO
PLL-DATA
PLL-STB
PLL-CK
RESET
TUNED
STOP
PROTECTION
TU-MUTE
VIDEO-A
VIDEO-B
GND
CN14A TO 1U-2883-1 FLD UNIT
DD-CK
DD-REQ
DD-DATA
EXP-DATA
EXP-CK
EXP-STB
VR-CK
VR-DATA
VR-STB
RDS-START
RDS-CK
RDS-DATA
RDS-RESET
CN4B TO 1U-2883-3 VIDEO UNIT
-12V
GND
VA2
VB2
CN10A TO 1U-2867-1 INPUT&SURROUND UNIT
BYPASS
PRO_LOGIC
NORMAL
WIDE
DD-DATA
DD-CK
DD-REQ
SURR
L+R
L-R

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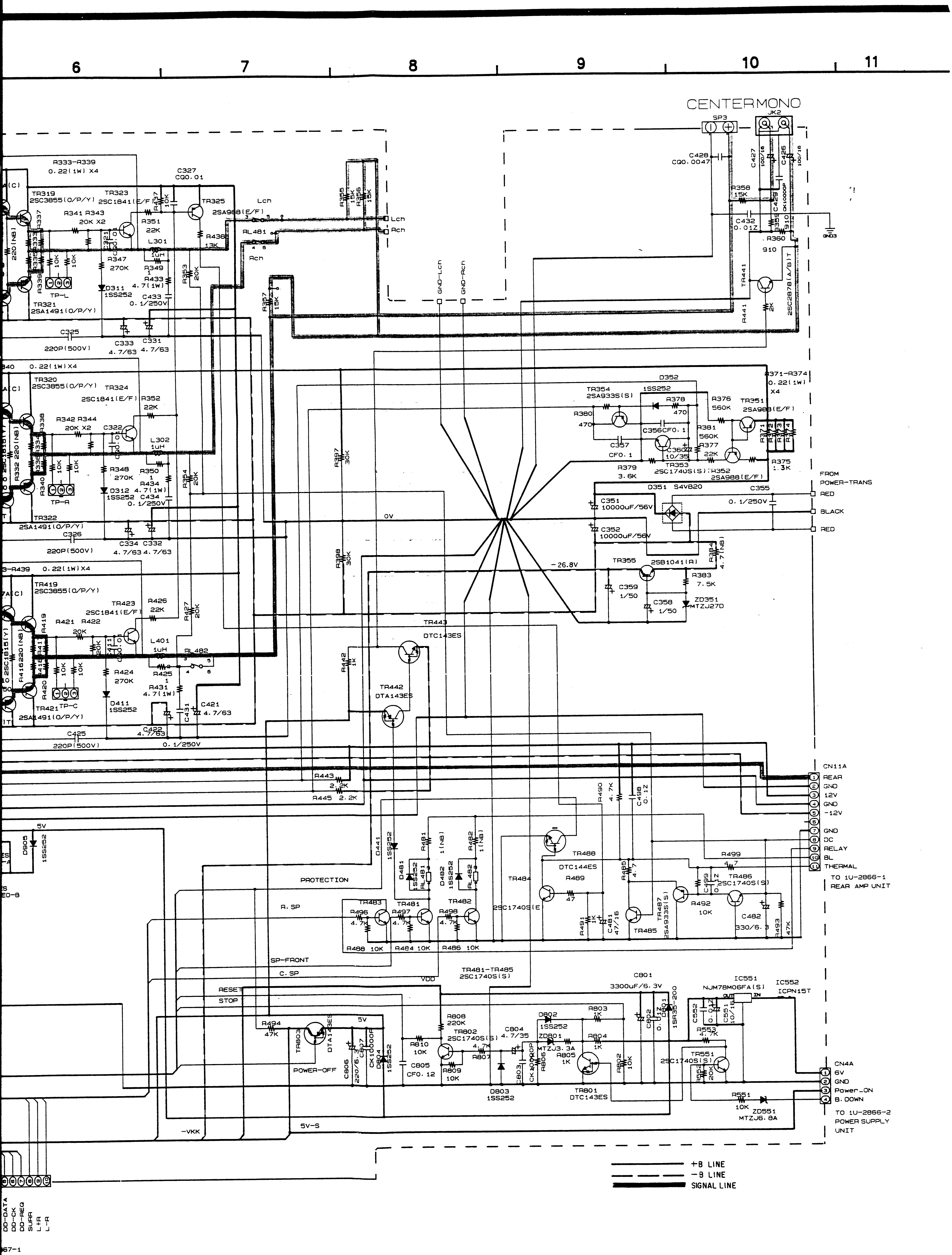
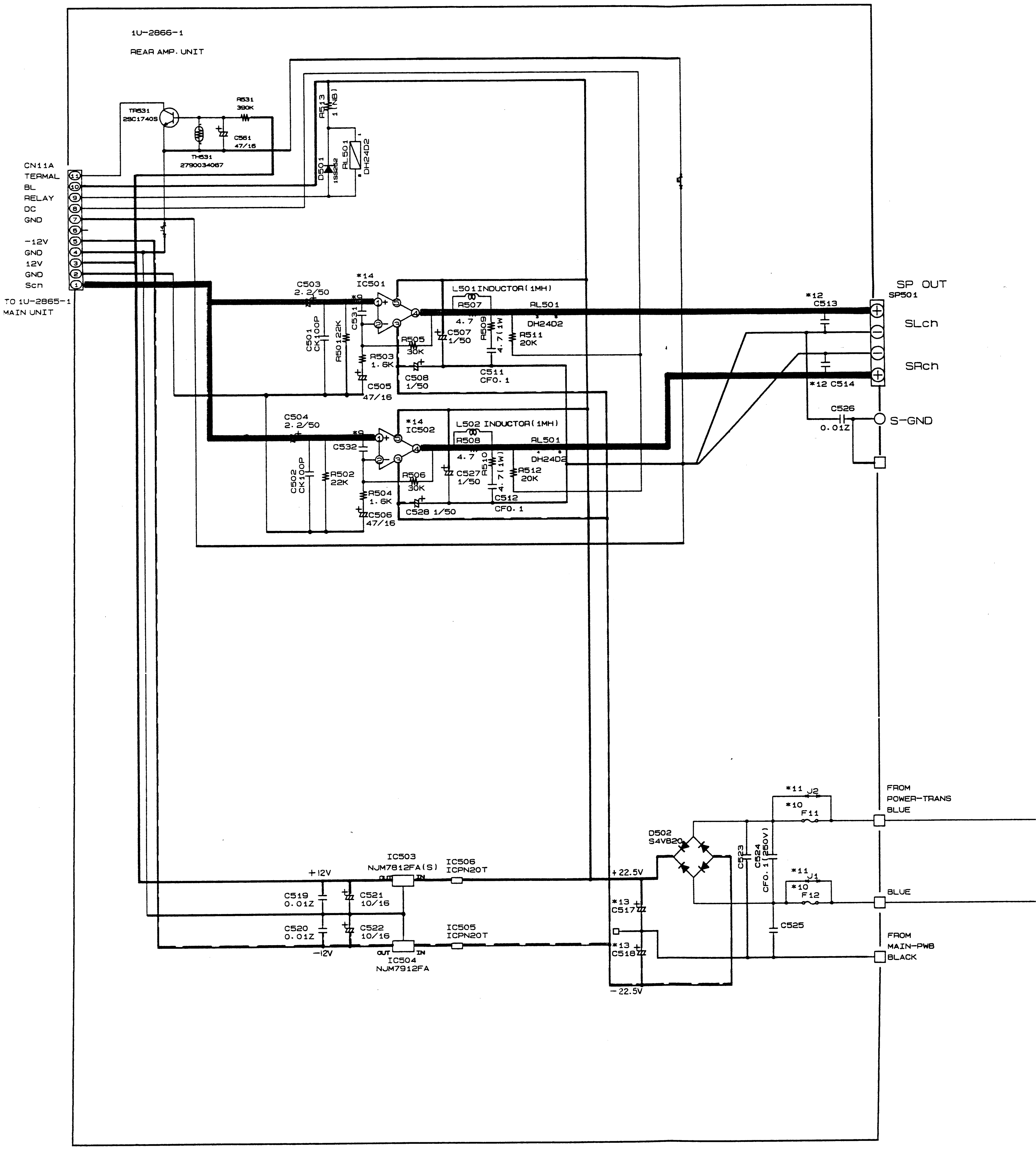
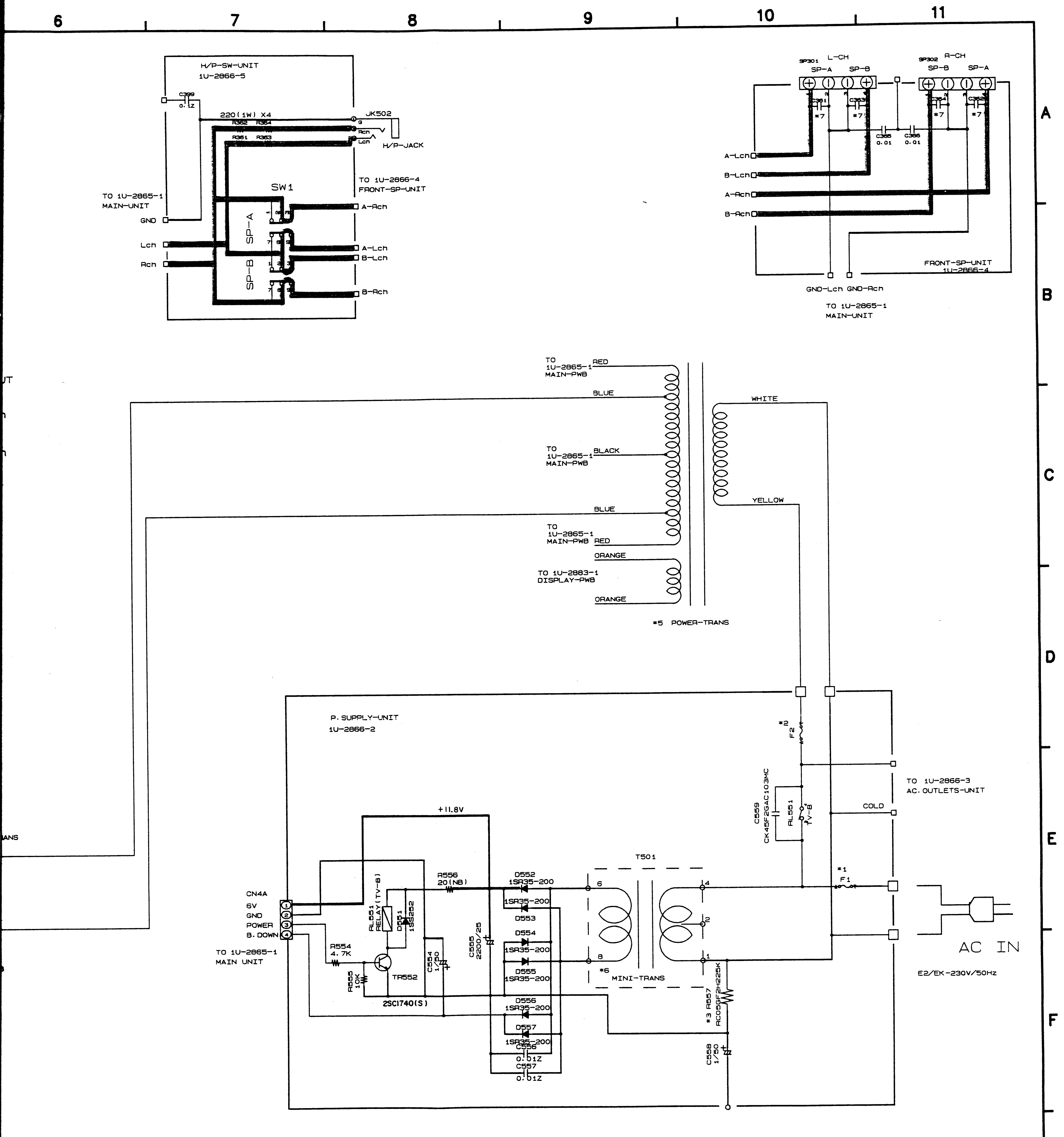

6
7
8
9
10
11
CENTERMONO
SP3
JK2
C428 CQ0.0047
C427 100/16
C426 100/16
R358 15K
C429 CK10000P
C432 0.01Z
R359 910
R360 910
GND3
TR441 2SC2878(A/B)T
R441 2K
R333-R339 0.22(1W) X4
C327 CQ0.01
TR319 2SC3855(O/P/Y)
TR323 2SC1841(E/F)
TR325 2SA988(E/F)
R341 R343 20K X2
R351 22K
L301 1uH
R436 13K
R347 270K
R349
R433 4.7(1W)
R353 20K
D311 1SS252
C433 0.1/250V
TP-L
TR321 2SA1491(O/P/Y)
C325 220P(500V)
C333 4.7/63
C331 4.7/63
Lch
Rch
RL481
R355 15K
R356 15K
R357 15K
GND-Lch
GND-Rch
R340 0.22(1W)X4
TR320 2SC3855(O/P/Y)
TR324 2SC1841(E/F)
R352 22K
R342 R344 20K X2
C322
L302 1uH
R348 270K
R350
R434 4.7(1W)
D312 1SS252
C434 0.1/250V
R354 20K
TP-R
TR322 2SA1491(O/P/Y)
C326 220P(500V)
C334 4.7/63
C332 4.7/63
R397 30K
R398 30K
0V
R371-R374 0.22(1W) X4
D352 1SS252
TR354 2SA933S(S)
R378 470
R376 560K
TR351 2SA988(E/F)
R380 470
C356 CF0.1
R381 560K
C357 CF0.1
C360 10/35
R377 22K
R379 3.6K
TR353 2SC1740S(S)
TR352 2SA988(E/F)
R375 1.3K
FROM POWER-TRANS
RED
BLACK
RED
D351 S4V820
C355 0.1/250V
C351 10000uF/56V
C352 10000uF/56V
-26.8V
TR355 2SB1041(R)
R384 4.7(NB)
R383 7.5K
C359 1/50
C358 1/50
ZD351 MTZJ27D
R439 0.22(1W)X4
TR419 2SC3855(O/P/Y)
TR423 2SC1841(E/F)
R426 22K
R427 20K
R421 R422 20K
L401 1uH
RL482
R424 270K
R425
R431 4.7(1W)
D411 1SS252
TP-C
TR421 2SA1491(O/P/Y)
C421 4.7/63
C422 4.7/63
C431
C425 220P(500V)
0.1/250V
TR443 DTC143ES
R442 1K
TR442 DTA143ES
R443 2.2K
R445 2.2K
CN11A
REAR
GND
12V
GND
-12V
GND
DC
RELAY
BL
THERMAL
TO 1U-2866-1 REAR AMP UNIT
R490 4.7K
C498 0.1Z
D441 1SS252
R481 1(NB)
R482 1(NB)
D481 1SS252
RL481
D482 1SS252
RL482
TR488 DTC144ES
R489 47
R485 4.7
R499 4.7
C499 0.1Z
TR486 2SC1740S(S)
PROTECTION
R. SP
TR483
TR481
TR482
R496 4.7K
R497 4.7K
R498 4.7K
TR484 2SC1740S(E)
R491 1K
C481 47/16
TR485
TR487 2SA933S(S)
R492 10K
C482 330/6.3
R493 47K
R488 10K
R484 10K
R486 10K
SP-FRONT
C. SP
VDD
TR481-TR485 2SC1740S(S)
5V
D905 1SS252
RESET
STOP
C801 3300uF/6.3V
IC551 NJM78M06FA(S)
IC552 ICPN15T
R494 47K
TR803 DTA143ES
5V
R808 220K
TR802 2SC1740S(S)
C804 4.7/35
D802 1SS252
R803 1K
C802 0.01Z
D801 1SR35-200
C552 0.01Z
C551 10/16
R553 4.7K
R810 10K
C807 220/6.3
C806 CK10000P
D804 1SS252
C805 CF0.12
R809 10K
R807
ZD801 MTZJ3.3A
R806
R804 1K
R805 1K
C803 CK10000P
R802 10K
TR551 2SC1740S(S)
R552 20K
POWER-OFF
D803 1SS252
TR801 DTC143ES
R551 10K
ZD551 MTZJ6.8A
CN4A
6V
GND
Power_ON
B. DOWN
TO 1U-2866-2 POWER SUPPLY UNIT
-VKK
5V-S
+B LINE
-B LINE
SIGNAL LINE
DD-DATA
DD-CK
DD-REQ
SURR
L+R
L-R
367-1
URROUND

SCHEMATIC DIAGRAM

1 2 3 4 5 6


1U-2866-1
REAR AMP. UNIT
CN11A
TERMAL
BL
RELAY
DC
GND
-12V
GND
12V
GND
Scn
TO 1U-2865-1
MAIN UNIT
TR531
2SC1740S
R531
390K
C561
47/16
TH531
2790034067
R513
1 (NB)
D501
1SS252
RL501
DH24D2
*14
IC501
C503
2.2/50
*9
C531
C501
CK100P
R501 22K
R503
1.6K
C505
47/16
R505
30K
L501 INDUCTOR (1MH)
R507
4.7
C507
1/50
R509
4.7 (1W)
R511
20K
RL501
DH24D2
C508
1/50
C511
CF0.1
C504
2.2/50
*9
*14
IC502
C532
C502
CK100P
R502
22K
R504
1.6K
C506
47/16
R506
30K
L502 INDUCTOR (1MH)
R508
4.7
C527
1/50
R510
4.7 (1W)
R512
20K
RL501
DH24D2
C512
CF0.1
C528 1/50
SP OUT
SP501
*12
C513
SLch
SRch
*12 C514
C526
0.01Z
S-GND
FROM
POWER-TRANS
BLUE
*11 J2
*10
F11
D502
S4VB20
C523
C524
CF0.1 (250V)
*11
J1
*10
F12
BLUE
C525
FROM
MAIN-PWB
BLACK
IC503
NJM7812FA(S)
OUT
IN
IC506
ICPN20T
+12V
+22.5V
C519
0.01Z
C521
10/16
*13
C517
C520
0.01Z
C522
10/16
IC505
ICPN20T
*13
C518
-12V
OUT
IN
IC504
NJM7912FA
-22.5V

	*9 C531 C532	*10 F11 F12	*11 J1 J2	*12 C513 C514	*13 C517 C518	*14 IC501 IC502
900 E3	-	5A /250V	-	-	3300uF/25V	SI-18751
900/950 E2/EK E1	CK100P	-	0	CQ4700P	3300uF/35V	SI-18752


6
7
8
9
10
11
A
B
C
D
E
F
G
H
H/P-SW-UNIT
1U-2866-5
C399
0.1Z
220(1W) X4
R362 R364
R361 R363
JK502
H/P-JACK
TO 1U-2866-4
FRONT-SP-UNIT
TO 1U-2865-1
MAIN-UNIT
GND
Lch
Rch
SW1
SP-A
SP-B
A-Rch
A-Lch
B-Lch
B-Rch
SP301 L-CH
SP-A SP-B
SP302 R-CH
SP-B SP-A
C361
C363
C364
C362
*7
C365 0.01
C366 0.01
A-Lch
B-Lch
A-Rch
B-Rch
FRONT-SP-UNIT
1U-2866-4
GND-Lch GND-Rch
TO 1U-2865-1
MAIN-UNIT
TO 1U-2865-1 MAIN-PWB
RED
BLUE
WHITE
BLACK
YELLOW
ORANGE
TO 1U-2883-1
DISPLAY-PWB
*5 POWER-TRANS
P. SUPPLY-UNIT
1U-2866-2
*2 F2
C559 CK45F2GAC103MC
RL551
TV-8
TO 1U-2866-3
AC. OUTLETS-UNIT
COLD
+11.8V
T501
*1 F1
AC IN
E2/EK-230V/50Hz
CN4A
6V
GND
POWER
B. DOWN
TO 1U-2865-1
MAIN UNIT
RL551 RELAY(TV-8)
D551 1SS252
R556 20(NB)
D552 1SR35-200
D553 1SR35-200
D554 1SR35-200
D555 1SR35-200
D556 1SR35-200
D557 1SR35-200
C555 2200/25
C554 1/50
R554 4.7K
R555 10K
TR552
2SC1740(S)
C556 0.01Z
C557 0.01Z
*6 MINI-TRANS
*3 R557 RC05GF2H225K
C558 1/50

	*1 F1	*2 F2	*3 R557	*4 AC OUTLETS	*5 POWER TRANS	*6 MINI-TRANS	*7 SW361-364
900 E3	8A/250V	6.3A/250V	2.2M	0	2336176004	2336073000	—
900 E2/EK	JUMPER	2.5A/250V	—	—	2336176002	2336058012	CQ6800P
950RD E2/EK	JUMPER	3.15A/250V	—	—	2336178002	2336058012	CQ6800P

+B LINE
-B LINE
SIGNAL LINE

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DENO-00279

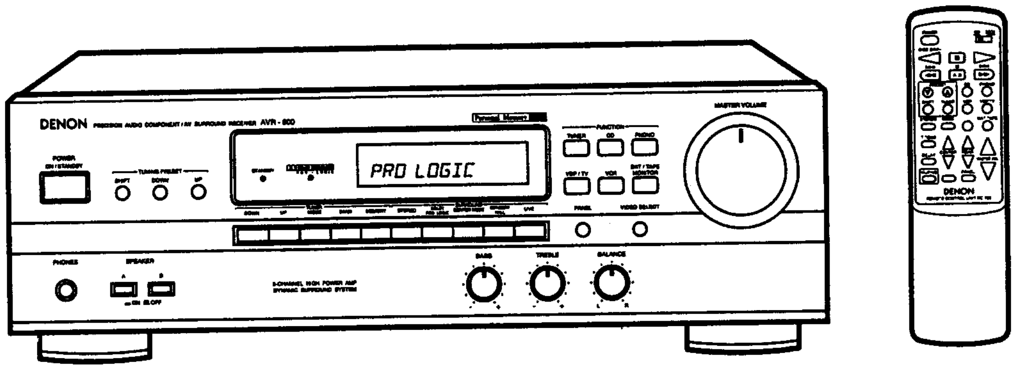
DENON

Hi-Fi AV Surround Receiver

SERVICE MANUAL

MODEL AVR-900

AV SURROUND RECEIVER



CONTENTS

OPERATING INSTRUCTIONS 2~9
WIRE ARRANGEMENT 10
DISASSEMBLY 11
CONNECTION DIAGRAM OF MEASURING INSTRUMENTS 12, 13
SEMICONDUCTORS 14~22
NOTE FOR PARTS LIST 23
PARTS LIST OF P. W. BOARD 24~30
PRINTED WIRING BOARD 31~35
EXPLODED VIEW 36
PARTS LIST OF EXPLODED VIEW 37
ADDENDUM PARTS LIST 37
BLOCK DIAGRAM 38
WIRING DIAGRAM 39
REMOTE CONTROL UNIT (RC-195) 40
SCHEMATIC DIAGRAM 41~45

NIPPON COLUMBIA CO., LTD.

- **SAFETY PRECAUTIONS**

CAUTION

RISK OF ELECTRIC SHOCK

DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

- **FOR U.S.A. & CANADA MODEL ONLY**

CAUTION

TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE

- **POUR LES MODELE CANADIEN UNIQUEMENT**

ATTENTION

POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT

- **安全事項**

CAUTION

RISK OF ELECTRIC SHOCK

DO NOT OPEN

注意：為減少觸電危險，切勿拆下機殼（或機背）。機身內並無用戶修理用零件。請交由專業修理人員修理本機。

三角形內有箭頭的閃電符號旨在提醒用戶、本產品機殼內有未經絕緣的"危險電壓"、其幅度足以使人觸電而發生危險。

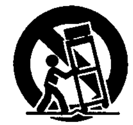
三角形內加感嘆號旨在提醒用戶，有重要的操作與維修說明書配合本機。

警告：為減少着火或觸電危險，切勿讓本機受雨淋濕或受潮。

SAFETY INSTRUCTIONS

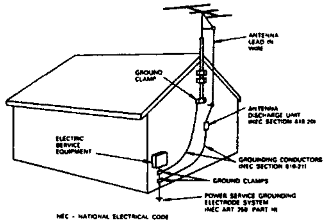
1. Read Instructions – All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and use instructions should be followed.
5. Water and Moisture – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



7. Wall or Ceiling Mounting – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization – Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

FIGURE A
EXAMPLE OF ANTENNA GROUNDING
AS PER NATIONAL
ELECTRICAL CODE


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250 PART H)
NEC - NATIONAL ELECTRICAL CODE

12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
14. Cleaning – The appliance should be cleaned only as recommended by the manufacturer.
15. Power Lines – An outdoor antenna should be located away from power lines.
16. Outdoor Antenna Grounding – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
17. Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
18. Object and Liquid Entry – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
19. Damage Requiring Service – The appliance should be serviced by qualified service personnel when:
    - A. The power-supply cord or the plug has been damaged; or
    - B. Objects have fallen, or liquid has been spilled into the appliance; or
    - C. The appliance has been exposed to rain; or
    - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    - E. The appliance has been dropped, or the enclosure damaged.
20. Servicing – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

TABLE OF CONTENTS

1 Introduction 5
2 Connections
2-1 Connecting the audio components 6
2-2 Speaker system connections 7
2-3 Connecting the video components 7
2-4 Connecting the antenna terminals 8
3 Remote Control Unit 8, 9
4 Operations
4-1 Preparations for playback 9
4-2 Playing the program source (stereo play back) 10
4-3 Simulcast play back 10
4-4 Using the muting function 10
4-5 Listen with headphones 10
4-6 Recording the program source 11
4-7 Front panel display 11
4-8 Using the surround function 11–13
5 Listening to the radio
5-1 Auto preset memory 13
5-2 Auto tuning 13
5-3 Manual tuning 14
5-4 Preset memory 14
5-5 Recalling preset stations 14
6 Initialization of the Microprocessor 14
7 Last function memory 15
8 Troubleshooting 15
9 Specifications 16

TABLE DES MATIERES

1 Introduction 17
2 Connexions
2-1 Connexion des composants audio 18
2-2 Connexions du système d'enceintes 19
2-3 Connexions des composants vidéo 19
2-4 Connexions des bornes d'antennes 20
3 Télécommande 20, 21
4 Fonctionnement
4-1 Préparatifs pour la lecture 21
4-2 Lecture de la source de programme (lecture stéréo) 22
4-3 Lecture simultanée 22
4-4 Utilisation de là fonction de mise en sourdine 22
4-5 Ecoute avec casque 22
4-6 Enregistrement de la source de programme 23
4-7 Affichage du panneau avant 23
4-8 Utilisation de la fonction d'ambiance 23–25
5 Ecouter la radio
5-1 Mémoire préréglée automatique 25
5-2 Syntonisation automatique 25
5-3 Syntonisation manuelle 26
5-4 Mémoire préréglée 26
5-5 Rappel de stations préréglées 26
6 Initialisation du microprocesseur 26
7 Mémoire de la dernière fonction 27
8 Dépistage des pannes 27
9 Spécifications 28

目錄

1 序言 ··························29
2 聯接方法
2-1 聯接音響器材 ··························30
2-2 揚聲器系統聯接法 ··························31
2-3 聯接影視設備 ··························31
2-4 連接天線端子 ··························32
3 遙控器 ··························32, 33
4 操作方法
4-1 播放準備 ··························33
4-2 播放程序音源（立體聲重播） ··························34
4-3 影音聯播 ··························34
4-4 使用靜音功能 ··························34
4-5 用耳筒收聽 ··························34
4-6 節目源錄音 ··························35
4-7 面板顯示 ··························35
4-8 使用環迴聲功能 ··························35～37
5 收聽電台廣播
5-1 自動預設記憶 ··························37
5-2 自動調諧 ··························37
5-3 手動調諧 ··························38
5-4 預設記憶 ··························38
5-5 叫出預設電台 ··························38
6 微處理器之初始化 ··························38
7 最後功能儲存 ··························39
8 故障診斷 ··························39
9 規格 ··························封底

- **ACCESSORIES**

Check that the following parts are included in addition to the main unit:

① Operating instructions 1
② Warranty (for North American model only) 1
③ Remote control unit (RC-195) 1
④ R6P/AA batteries 2
⑤ AM loop antenna 1
⑥ FM indoor antenna 1

- **ACCESSOIRES**

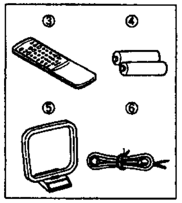
Vérifier que les articles suivants sont inclus dans le carton en plus de l'unité principale:

① Mode d'emploi 1
② Garantie (uniquement pour modèle nord-américain) 1
③ Télécommande (RC-195) 1
④ Piles R6P/AA 2
⑤ Antenne-cadre AM 1
⑥ Antenne intérieure FM 1

- **附件**

下列附件是隨主機附送

① 操作説明書 ·····················1
② 保用証（只限北美機型）·····················1
③ 遙控器（RC-195）···1
④ R6P/AA電池······2
⑤ AM環形天線 ······1
⑥ FM室內天線 ·······1

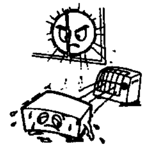


- We greatly appreciate your purchase of the AVR-900.
- To be sure you take maximum advantage of all the features the AVR-900 has to offer, read these instructions carefully and use the set properly. Be sure to keep this manual for future reference should any questions or problems arise.

"SERIAL NO. ______________________
PLEASE RECORD UNIT SERIAL NUMBER ATTACHED TO THE REAR OF THE CABINET FOR FUTURE REFERENCE"

1 INTRODUCTION

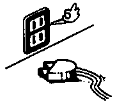
• NOTE ON USE



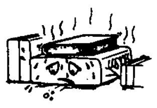
- Avoid high temperatures
  Allow for sufficient heat dispersion when installed on a rack.

- Handle the power cord carefully.
  Hold the plug when unplugging the cord.

- Keep the set free from moisture, water, and dust.



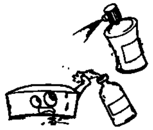
- Unplug the power cord when not using the set for long periods of time.



*(For sets with ventilation holes)

- Do not obstruct the ventilation holes.

- Do not let foreign objects in the set.



- Do not let insecticides, benzene, and thinner come in contact with the set.

- Never disassemble or modify the set in any way.

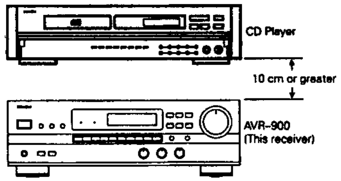
• INSTALLATION PRECAUTIONS

Using this receiver or other electronic equipment containing microprocessors simultaneously with a tuner or TV may result in noise in the sound or picture.

If this should happen, take the following steps:

- Install the receiver as far as possible from the tuner or TV set.
- Keep the antenna lines of the tuner or TV as far as possible from the receiver's power cord and connection cables.
- This problem is especially frequent when using indoor antennas. We recommend using outdoor antennas and 75 Ω/ohms coaxial cables.

A note on stacking



For cooling purposes, do not place another AV component directly on top of the receiver. Be sure to leave a space of at least 10 cm.

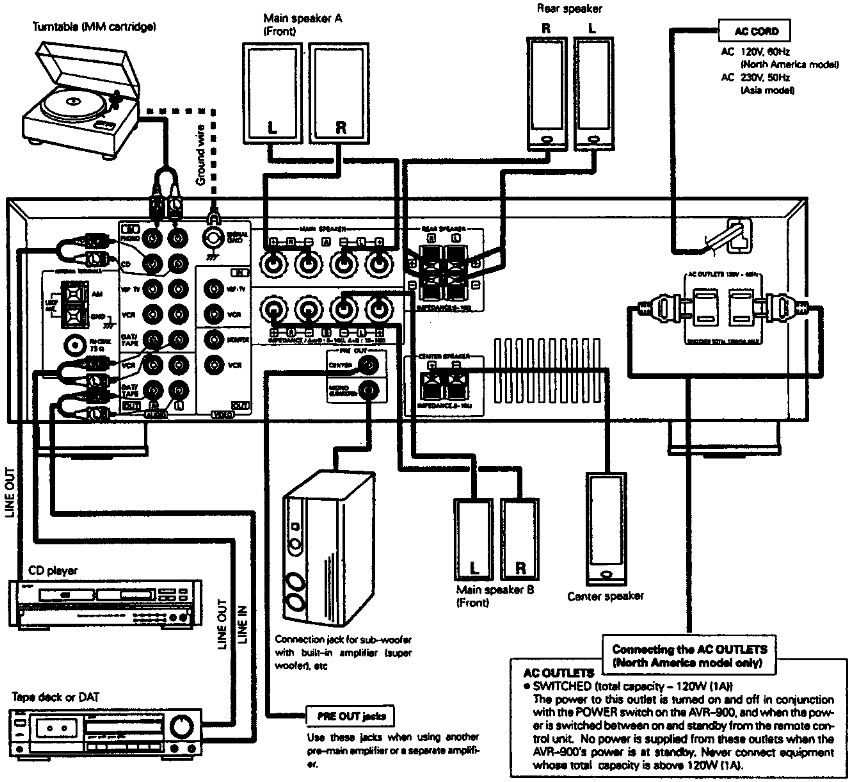
2 CONNECTIONS

- Do not plug in the power cord until all connections have been completed.
- Be sure to connect the left and right channels properly (left with left, right with right).
- Insert the plugs securely. Incomplete connections will result in the generation of noise.
- **Use the AC OUTLETS for audio equipment only. Do not use them for hair driers, etc.**
- Note that binding pin plug cords together with power cords or placing them near a power transformer will result in the introduction of hum or other noise.
- If hum or other noise is produced when the ground wire is connected, disconnect it.
- Noise or humming may be generated if a connected component is used independently without turning the power of the AVR-900 on. If this happens, turn on the power of the AVR-900.

2-1 Connecting the audio components

NOTE:
The receiver cannot be used with MC cartridges directly. Use a separate head amplifier or step-up transformer

- **Precautions when connecting speakers**
  If a speaker is placed near a TV or video monitor, the colors on the screen may be disturbed by the speaker's magnetism If this should happen, move the speaker away to a position where it does not have this effect.


Turntable (MM cartridge)
Ground wire
Main speaker A
(Front)
L
R
Rear speaker
R
L
AC CORD
AC 120V, 60Hz
(North America model)
AC 230V, 50Hz
(Asia model)
PHONO
CD
VDP/TV
VCR
DAT/TAPE
AM
FM
MONITOR
MAIN SPEAKER
REAR SPEAKER
CENTER SPEAKER
PRE OUT
CENTER
MONO SUBWOOFER
AC OUTLETS
LINE OUT
CD player
LINE OUT
LINE IN
Tape deck or DAT
Main speaker B
(Front)
L
R
Center speaker
Connection jack for sub-woofer with built-in amplifier (super woofer), etc
PRE OUT jacks
Use these jacks when using another pre-main amplifier or a separate amplifier.

Connecting the AC OUTLETS (North America model only)

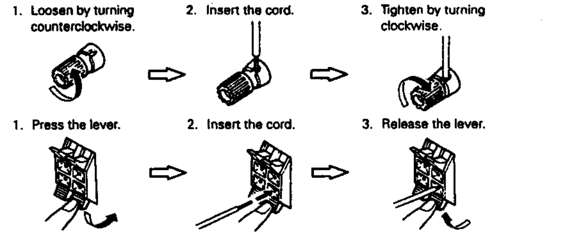
AC OUTLETS
- SWITCHED (total capacity – 120W (1A))
  The power to this outlet is turned on and off in conjunction with the POWER switch on the AVR-900, and when the power is switched between on and standby from the remote control unit. No power is supplied from these outlets when the AVR-900's power is at standby. Never connect equipment whose total capacity is above 120W (1A).

NOTE:
Only use the AC outlets for audio equipment. Never use them for hair driers, TVs or other electrical appliances.

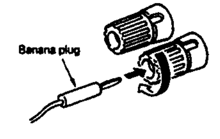
2-2 Speaker System Connections

- This receiver can accommodate connections of a total of seven speakers including two set of (front) main amplifier speakers (A and B), one set of rear speakers, and one center speaker.
- Connect the speaker terminals with the speakers making sure that like polarities are matched (⊕ with ⊕, ⊖ with ⊖). Mismatching of polarities will result in weak central sound, unclear orientation of the various instruments, and the sense of direc-tion of the stereo being impaired.
- When making connections, take care that none of the individual conductors of the speaker cord come in contact with adjacent terminals, with other speaker cord conductors, or with the rear panel.
- **Speaker Impedance**
  - When speaker systems A and B are use separately, speakers with an impedance of from 6 to 16 Ω/ohms can be connected.
  - Be careful when using two pairs of in speakers (A + B) at the same time, since use of speakers with an impedance outside the range of 12 to 16 Ω/ohms will lead to damage.
  - Speakers with an impedance of 8 to 12 Ω/ohms can be connected for use as center and rear speakers.
  - The protection circuit may operate or damage may occur when speakers with an impedance outside of the above range are used.

Connecting the speaker terminals


1. Loosen by turning counterclockwise.
2. Insert the cord.
3. Tighten by turning clockwise.
1. Press the lever.
2. Insert the cord.
3. Release the lever.

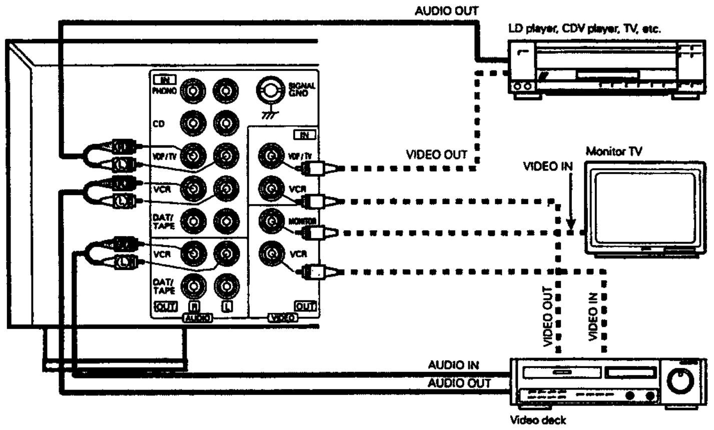
Connecting banana plugs (North America model only)


Banana plug

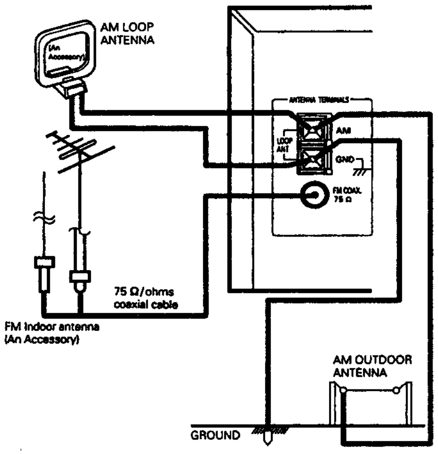
Turn clockwise to tighten, then insert the banana plug.

2-3 Connecting the video components

To connect the video signal, connect using a 75 Ω/ohms video signal cable cord. Using an improper cable can result in a drop in sound quality.

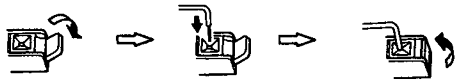

AUDIO OUT
LD player, CDV player, TV, etc.
PHONO
CD
VDP/TV
VCR
DAT/TAPE
SIGNAL GND
MONITOR
VIDEO OUT
VIDEO IN
Monitor TV
VIDEO OUT
VIDEO IN
AUDIO IN
AUDIO OUT
Video deck

2-4 Connecting the antenna terminals


AM LOOP
ANTENNA
(An Accessory)
ANTENNA TERMINALS
LOOP ANT
AM
GND
FM COAX. 75 Ω
75 Ω/ohms
coaxial cable
FM Indoor antenna
(An Accessory)
AM OUTDOOR
ANTENNA
GROUND

Connection of AM antennas

1. Push the lever.
2. Insert the conductor.
3. Return the lever.



ANTENNA INSTALLATION

- **FM ANTENNA**

  The supplied FM antenna can be used inside wooden houses for receiving local FM stations and other strong FM signals. Stretch out the ends of the antenna and mount the antenna on the wall or ceiling where optimum reception is achieved

  A indoor FM antennas may not consistently ensure stable reception, due to environment changes. In such cases, the indoor FM antenna should only be used temporarily until an outdoor FM antenna has been installed.

  When connecting an outdoor FM antenna, the use of 75 Ω/ohms coaxial cable (3C-2V, 5C-2V) is strongly recommended.
- **AM ANTENNA**

  Attach the supplied AM loop antenna even when using an outdoor AM antenna.

  Connect the leads to the AM and GND terminals.

  Also use the AM terminals for connecting an outdoor AM antenna (when making such a connection do not disconnect the AM loop antenna.)

  Adjust the loop antenna to obtain optimum reception. Where broadcast stations are distant and only weak signals are received, or where signals are blocked, it is best to install an outdoor AM antenna.

NOTES

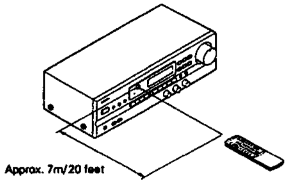
- This receiver has a full back-up system. When the power is turned on, the INPUT SELECTOR buttons are set to the last mode set before the power was turned off.
- When using this receiver in close proximity to video equipment (TV, VCR, VDP, etc.), noise may be generated in AM broadcasts. To avoid this, keep the receiver as far away from other video components as possible, or detach the AM loop antenna from the antenna holder and place it where noise is reduced. If the noise is not reduced, turn off the power of the video components when listening to AM broadcasts.

Note to CATV system installer:
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

3 REMOTE CONTROL UNIT

Following the procedure outlined below, insert the batteries before using the remote control unit.

■ Range of operation of the remote control unit

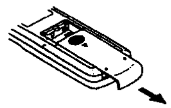
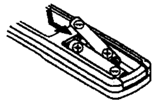
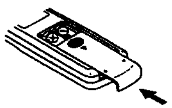

Approx. 7m/20 feet

Point the remote control unit at the remote control sensor as shown on the diagram at the left.

NOTES:

- The remote control unit can be used from a straight distance of approximately 7 meters/20 feet, but this distance will shorten or operation will become difficult if there are obstacles between the remote control unit and the remote control sensor, if the remote control sensor is exposed to direct sunlight or other strong light, or if operated from an angle.
- Neon signs or other devices emitting pulse-type noise nearby may result in malfunction, so keep the set as far away from such devices as possible.

■ Inserting the batteries

1. Open the bottom cover of the remote control unit and remove the battery cover. 	2. Insert the two R6P/AA batteries, matching the ⊕ and ⊖ marks on the batteries with those in the case. 	3. Close the bottom cover until it clicks shut. 

NOTES

- Use only AA, R6P, UM-3 batteries for replacement.
- Be sure the polarities are correct. (See the illustration inside the battery compartment.)
- Remove the batteries if the remote control transmitter will not be used for an extended period of time.
- If batteries leak, dispose of them immediately. Avoid touching the leaked material or letting it come in contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.
- Have replacement batteries on hand so that the old batteries can be replaced as quickly as possible when the time comes.

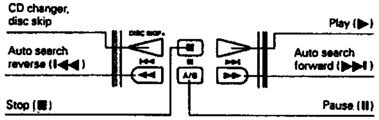
■ System code buttons

DENON remote-controllable audio components can be controlled using this unit's remote control unit.
Note that some components, however, cannot be operated with this remote control unit.

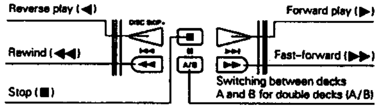
1. Set the slide switch to the position for the component to be operated (CD or DECK).

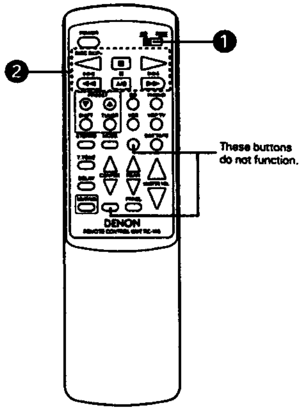
2. Use the buttons shown below to operate the component.
   For details, refer to the respective component's manual.

a. For CD players


CD changer, disc skip
Auto search reverse (I◀◀)
Stop (■)
Play (▶)
Auto search forward (▶▶I)
Pause (II)
DISC SKIP
A/B

b. For tape decks

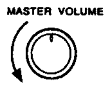

Reverse play (◀)
Rewind (◀◀)
Stop (■)
Forward play (▶)
Fast-forward (▶▶)
Switching between decks A and B for double decks (A/B)
DISC SKIP
A/B


❶
❷
These buttons do not function.
DENON

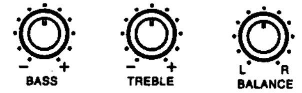
4 OPERATIONS

4-1 Preparations for Play Back

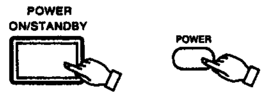
❶ Check that all connectioned are proper.
❷ Set to the minimum position.

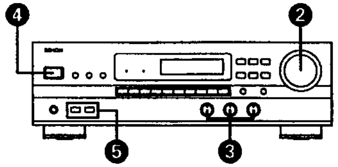

MASTER VOLUME

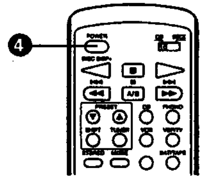
❸ Set to the center position.


–
+
BASS
–
+
TREBLE
L
R
BALANCE

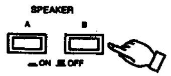
❹ Press the power button to turn the power on.


POWER
ON/STANDBY
POWER



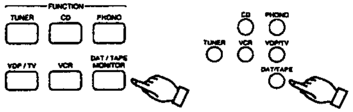


❺ Select the front speakers.
Press the speaker A or B switch to turn the speaker on.


SPEAKER
A
B
ON
OFF

4-2 Playing the program source (Stereo play back)

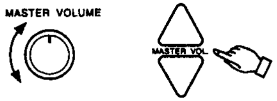
❶ Select the source to be played.



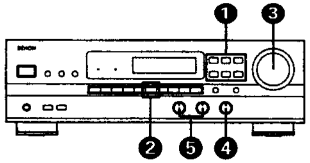
❷ Select the STEREO mode.

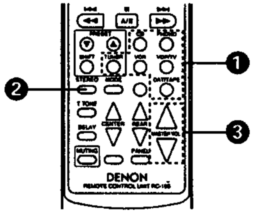
DOLBY
STEREO PRO LOGIC
STEREO

❸ Adjust the MASTER VOLUME control.

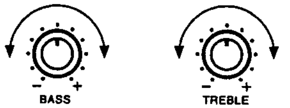


❹ Adjust the front left/right BALANCE.
Turn the control counterclockwise to reduce the volume of the right channel, clockwise to reduce the volume of the left channel





❺ Adjust the BASS and TREBLE.



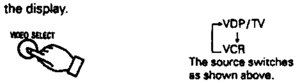
Turn the control clockwise to increase the bass, counterclockwise to decrease it.

Turn the control clockwise to increase the treble, counterclockwise to decrease it.

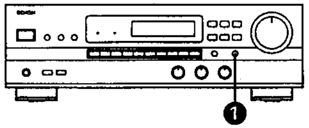
4-3 Simulcast playback

Use this switch to monitor a video source other than the audio source.

❶ Press and hold the VIDEO SELECT button until the desired source appears on the display.



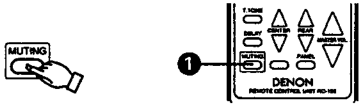
The source switches as shown above.



※ Cancelling simulcast playback
- Press the VIDEO SELECT button once more.
- Select the VIDEO function.

4-4 Using the muting function

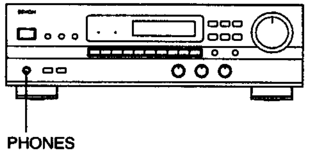
Use this to turn off the audio output temporarily.
❶ Press the MUTING button.
※ Cancelling MUTING mode.
Press the MUTING button again.



This function can only be set from the remote control unit.
The STANDBY LED flashes when the muting function is set.

4-5 Listen with headphones

Connect the headphones to the PHONES jacks.
When listening with headphones privately, set A, B SPEAKER switches and the superwoofer's power switch to the OFF position and set the stereo surround mode.



4-6 Recording the program source

(recording the source currently being monitored)

❶ Follow steps 1 to 3 under "Playing the program source".

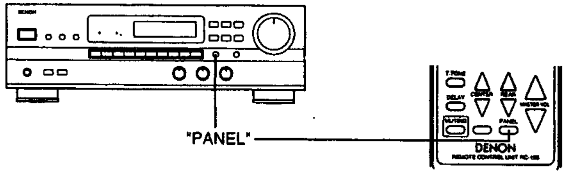
❷ Start recording on the tape or video deck.
For instructions, refer to the component's operating instructions.

Simultaneous recording

The signals of the source selected with the function selector button are output simultaneously to the DAT/TAPE and VCR REC OUT jacks. If a total of two tape and/or video decks are connected and set to the recording mode, the same source can be recorded simultaneously on both decks.
In addition, if the TAPE MONITOR (DAT/TAPE) button is pressed, the audio signals from the tape deck are output to the VCR AUDIO REC OUT jacks.

4-7 Front panel display

Descriptions of the unit's operations are also displayed on the front panel display. In addition, the display can be switched to check the unit's operating status while playing a source by pressing the PANEL button



4-8 Using the surround function

Types of surround modes and their characteristics

1	Dolby Pro Logic	Use this when playing program sources recorded in Dolby Surround or Dolby stereo.
2	CONCERT HALL	Use this setting to create the atmosphere of a concert hall. There will be no output from the center speaker
3	LIVE	Use this setting to create the atmosphere of watching a live performance. There will be no output from the center speaker.

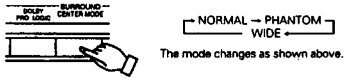
- **Before using the surround function**

Make the following adjustments before using the surround function.

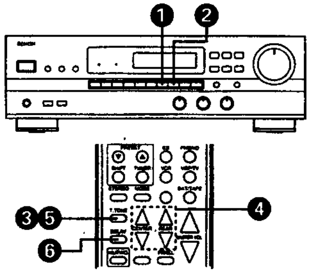
❶ Set the Dolby Pro Logic mode

DOLBY
PRO LOGIC
MODE

❷ Select the center mode.
Select the center mode according to the center speaker.

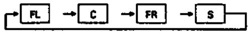


The mode changes as shown above.

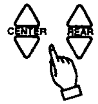


❸ Emit the test tone.

Test tones are produced from the speakers in the order shown below, at 4 second intervals for the first two cycles, 2 second intervals after that.

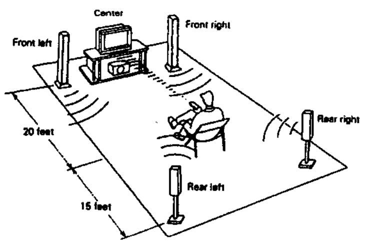


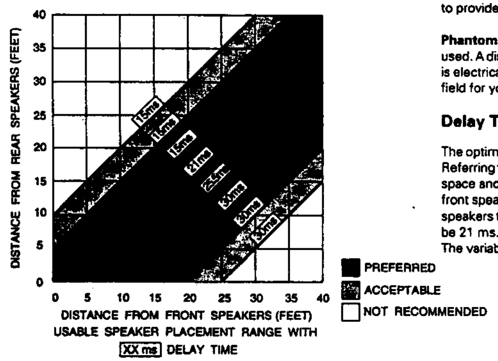
❹ Adjust the center and rear levels to set the volume of the speakers to the same level.



❺ Turn the test tone off.

❻ Adjust the delay time and seating position as necessary.





DISTANCE FROM FRONT SPEAKERS (FEET)
USABLE SPEAKER PLACEMENT RANGE WITH
XX ms DELAY TIME

Center Mode

Set the center mode as described below, according to the type of center speaker being used.

Normal mode: This mode is suited for an arrangement in which the center channel speaker is smaller than the left and right speakers. Signals below 100 Hz which have almost no effect on directional orientation are distributed to the left and right channels, whereas the center channel output signals greater than 100 Hz. As a result, the bass of the left and right channels increases the apparent deepness of the sound.

Wide mode: This mode is suited for an arrangement in which the center channel speaker is of the same grade as the left and right speakers. The entire sound band from low region to high is output to the center channel to provide an exciting sound field for your enjoyment.

Phantom mode: Use this mode when center channel speaker is not used. A directional emphasis circuit provides signal reproduction which is electrically oriented to the center and this provides an exciting sound field for your enjoyment.

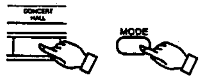
Delay Time

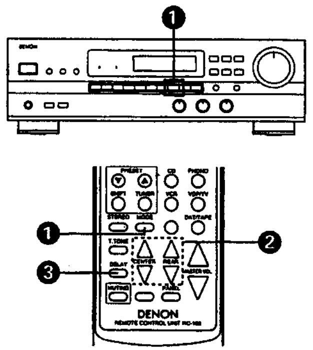
The optimum delay time will differ depending on the listening position. Referring to the chart at left, set the optimum delay time for your room's space and seating position. For example, when the distance from the front speakers to the listening position is 20 feet and that from the rear speakers to the listening position is 15 feet, the optimum delay time will be 21 ms.
The variable range of the delay time differs depending on the mode.

Personal Memory Plus function .... for EASY TO USE
The AVR-900 automatically stores the surround mode adding effects for all input sources. The corresponding surround mode is recalled automatically each time an input source is selected.

• Using the surround function

❶ Select the surround mode according to the input source.





❷ If necessary, adjust the levels.

❸ Adjust the parameters to the desired settings.

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Operating Possible in the Various Surround Modes

The following is a list of the buttons and functions which can be operated during the different surround modes. Figures in parentheses indicate adjustment ranges.

		OUTPUT	CENTER LEVEL	REAR LEVEL	CENTER MODE	TEST TONE	DELAY TIME
DOLBY PRO LOGIC	NORMAL	○	○ (0~-24dB)	○ (0~-24dB)	○	○	○ (15~30ms)
	PHANTOM	○	×	○ (0~-24dB)	○	○	○ (15~30ms)
	WIDE	○	○ (0~-24dB)	○ (0~-24dB)	○	○	○ (15~30ms)
CONCERT HALL		○	×	○ (0~-24dB)	Δ[1]	×	○ (0~33ms)
LIVE		○	×	○ (0~-24dB)	Δ[1]	×	○ (0~33ms)

○: Operation possible   ×: Operation not possible

[1] Switches to the Dolby Pro Logic from any modes other than Dolby Pro Logic.
The level of the center and rear channels can be adjusted by 2 dB step.
The delay time can be set by 1.5 ms step.

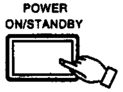
- **The sound may be distorted for some sources if the rear level is raised during surround playback. If this happens, lower the rear level.**

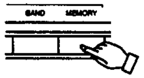
5 LISTENING TO THE RADIO

5-1 Auto preset memory

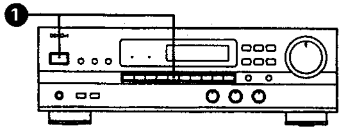
This unit is equipped with a function for automatically searching for FM broadcast stations and storing them in the preset memory.

❶ Press the POWER button while holding in the MEMORY button. The unit automatically begins searching for FM broadcast stations.





❷ When the first FM broadcast station is found, that station is stored in the preset memory at channel A1. Subsequent stations are automatically stored in order at preset channels A2 to A8, B1 to B8, C1 to C8, D1 to D8 and E1 to E8, for a maximum of 40 stations.



❸ Channel A1 is tuned in after the auto preset memory operation is completed.

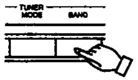
NOTES:
- If an FM station cannot be preset automatically due to poor reception, use the "Manual tuning" operation to tune in the station, then preset it using the manual "Preset memory" operation.
- RDS stations are stored in the memory with priority.
- To interrupt this function, press the POWER button.

5-2 Auto tuning

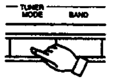
❶ Set the input function to "TUNER".

FUNCTION
TUNER
CD
TUNER

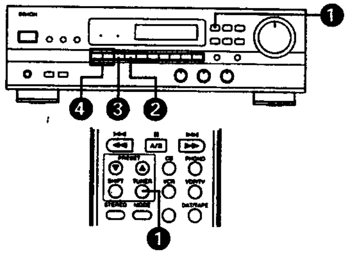
❷ Watching the display, press the BAND button to select the desired band (AM or FM).



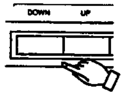
❸ Press the MODE button to set the auto tuning mode.



"AUTO" appears on the display.



❹ Press the TUNING UP or DOWN button.



Automatic searching begins, then stops when a station is tuned in.

If tuning does not stop at the desired station, use to the "Manual tuning" operation.

5-3 *Manual tuning*

❶ Set the input function to "TUNER".

❷ Watching the display, press the BAND button to select the desired band (AM or FM).

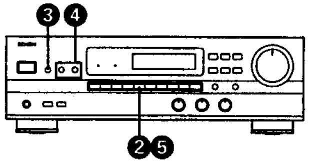
❸ Press the MODE button to set the manual tuning mode.
Check that the display's "AUTO" indicator turns off.

❹ Press the TUNING UP or DOWN button to tune in the desired station.
The frequency changes continuously when the button is held in.

NOTES:

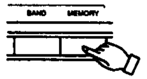
- When in the auto tuning mode on the FM band, the "STEREO" indicator lights on the display when a stereo broadcast is tuned in. At open frequencies, the noise is muted and the "TUNED" and "STEREO" indicators turn off.
- When the manual tuning mode is set, FM stereo broadcasts are received in monaural and the "STEREO" indicator turns off.

5-4 Preset memory



❶ Use the "Auto tuning" or "Manual tuning" operation to tune in the station to be preset in the memory.

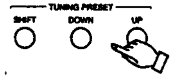
❷ Press the MEMORY button.



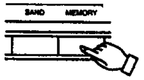
❸ Press the SHIFT button and select the desired memory block (A to E).

TUNING PRESET
SHIFT
DOWN
UP

❹ Press the PRESET UP or DOWN button to select the desired preset channel (1 to 8).

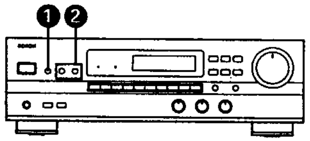


❺ Press the MEMORY button again to store the station in the preset memory.



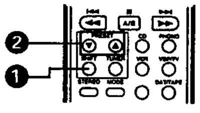
To preset other channels, repeat steps ❸ to ❺.
A total of 40 broadcast stations can be preset — 8 stations (channels 1 to 8) in each of blocks A to E.

5-5 Recalling preset stations



❶ Watching the display, press the SHIFT button to select the preset memory block.

TUNING PRESET
SHIFT
DOWN
UP



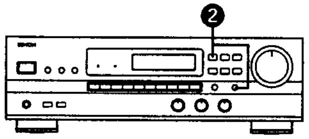
❷ Watching the display, press the PRESET UP or DOWN button to select the desired preset channel.

TUNING PRESET
SHIFT
DOWN
UP

6 INITIALIZATION OF THE MICROPROCESSOR

When the indication of the MFD display is not normal or when the operation of the unit does not shows the reasonable result, the initialization of the microprocessor is required by the following procedure.

1. Switch off the unit and remove the AC power cord from the wall outlet.
2. Hold the following TUNER button and VIDEO SELECT button, and plug the power cord into the outlet.
3. Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons.
4. Switch on the unit and the microprocessor will be initialized.



7 LAST FUNCTION MEMORY

- This receiver is equipped with a last function memory which stores the input and output setting conditions as they were immediately before the power is switched off.
  This function eliminates the need to perform complicated resettings when the power is switched on.
- This receiver is also equipped with a back-up memory. This function provides approximately one week of memory storage with the power cord disconnected.

8 TROUBLESHOOTING

If a problem should arise, first check the following:

1. **Are the connections correct?**
2. **Have you operated the amplifier according to the Operating Instructions?**
3. **Are the speakers, turntable, and other components operating properly?**

If the receiver is not operating properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. Disconnect the power immediately and contact your store of purchase.

	Symptom	Cause	Measures	Page
Common problems arising when listening to the CD, records, tapes, and FM broadcasts, etc.	DISPLAY not lit and sound not produced when power switch set to on.	• Power cord not plugged in securely.	• Check the insertion of the power cord plug.	6
	DISPLAY lit but sound not produced.	• Speaker cords not securely connected. • Speaker switch is off. • Improper position of the audio function button. • Volume control set to minimum. • MUTING is on.	• Connect securely. • Turn on speaker switch. • Set to a suitable position. • Turn volume up to suitable level. • Switch off MUTING.	6, 7 9 10 9 10
	-PROTECT- display appears.	• Speaker terminals are short-circuited. • Block the ventilation holes of the set • The unit is operating at continuous high power conditions and/or inadequate ventilation.	• Switch power off, connect speakers properly, then switch power back on. • Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on. • Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on.	6, 7 — —
	Sound produced only from one channel.	• Incomplete connection of speaker cords. • Incomplete connection of input/output cords • Left/right balance is off.	• Connect securely. • Connect securely. • Adjust balance knob properly.	6, 7 6, 7 9
	Positions of instruments reversed during stereo playback.	• Reverse connections of left and right speakers or left and right input/output cords.	• Check left and right connections.	6, 7
	Sound seems distorted.	• Rear level is too high.	• Set the rear level to lower level.	11, 12
When playing records	Humming noise produced when record is playing.	• Ground wire of turntable not connected properly. • Incomplete PHONO jack connection. • TV or radio transmission antenna nearby.	• Connect securely. • Connect securely. • Contact your store of purchase.	6 6 —
	Howling noise produced when volume is high.	• Turntable and speaker systems too close together. • Floor is unstable and vibrates easily.	• Separate as much as possible. • Use cushions to absorb speaker vibrations transmitted by floor. If turntable is not equipped with insulators, use audio insulators (commonly available).	— —
	Sound is distorted.	• Stylus pressure too weak. • Dust or dirt on stylus. • Cartridge defective.	• Apply proper stylus pressure. • Check stylus. • Replace cartridge.	— — —
	Volume is weak.	• MC cartridge being used.	• Replace with MM cartridge or use a head amplifier or step-up transformer.	6
Remote control unit	Receiver does not operate properly when remote control unit is used.	• Batteries dead. • Remote control unit too far from receiver. • Obstacle between receiver and remote control unit. • Different button is being pressed. • ⊕ and ⊖ ends of battery inserted in reverse.	• Replace with new batteries. • Move closer. • Remove obstacle. • Press the proper button. • Insert batteries properly.	8, 9 8, 9 8, 9 8, 9 8, 9

9 SPECIFICATIONS

- **Audio Section**

(Power amplifier)	FRONT (main 2ch driven)	
Rated output:	60 W + 60 W	(8 Ω/ohms, 20 Hz – 20 kHz with 0.08% THD)
	90 W + 90 W	(6 Ω/ohms, EIAJ)
(All properties shown are only for the power amplifier stage.)	CENTER (center 1ch driven)	
	60 W	(8 Ω/ohms, 20 Hz – 20 kHz with 0.08% THD)
	90 W	(6 Ω/ohms, EIAJ)
	REAR (rear 2ch driven)	
	15 W + 15 W	(8 Ω/ohms, 1 kHz with 0.3% THD)
	25 W + 25 W	(6 Ω/ohms, EIAJ)
Output terminals:	Front:	6 to 16 Ω/ohms (for North America model) 8 to 16 Ω/ohms (for Asia model)
	Center:	8 to 16 Ω/ohms
	Rear:	8 to 16 Ω/ohms

(Pre-amplifier)
Line input (Each line input – FRONT SP OUT)

Input sensitivity / impedance:	150 mV/47 kΩ/kohms	PHONO (MM): 2.5 mV/47 kΩ/kohms
Frequency response:	10 Hz to 50 kHz:	±3 dB
Tone control range:	BASS:	±10 dB at 100 Hz
	TREBLE:	±10 dB at 10 kHz
Signal-to-noise ratio:	92 dB (STEREO)	

Phono equalizer (PHONO input – REC OUT)

RIAA deviation:	±1dB (20 Hz to 20 kHz)
Signal-to-noise ratio:	74 dB (A weighting, with 5 mV input)
Rated output / Maximum output:	150 mV / 8 V
Distortion factor:	0.03% (1 kHz, 1 V)

- **Tuner Section**

	[FM] (note: µV at 75 Ω/ohms, 0 dBf = 1 × 10^{-15} W)	**[AM]**
Receiving Range:	87.5 MHz ~ 107.9 MHz (for North America model) 87.50 MHz ~ 108.00 MHz (for Asia and Taiwan R.O.C. models)	520 kHz ~ 1710 kHz (for North America model) 522 kHz ~ 1611 kHz (for Asia and Taiwan R.O.C. models)
Usable Sensitivity:	1.0 µV (11.2 dBf)	18 µV
50 dB Quieting Sensitivity:	MONO 1.6 µV (15.3 dBf) STEREO 23 µV (38.5 dBf)	
Signal to Noise Ratio (IHF-A):	MONO 80 dB STEREO 75 dB	50 dB
Total Harmonic Distortion (at 1 kHz):	MONO 0.15% STEREO 0.3%	

- **Video Section**

Standard video jacks

Input and output level / impedance:	1 Vp-p/75 Ω/ohms
Frequency response:	2 Hz to 8 MHz +0, −3 dB

- **General**

Power supply:	AC 120 V, 60 Hz (for North America and Taiwan R.O.C. models) AC 230 V, 50 Hz (for Asia model)
Power consumption:	4.0 A (for North America model) 200 W (for Asia model)
Maximum external dimensions:	434 (W) × 142 (H) × 303 (D) mm (17-3/32" × 5-19/32" × 11-15/16")
Weight:	7.7 kg (17 lbs)

- **Remote control unit**

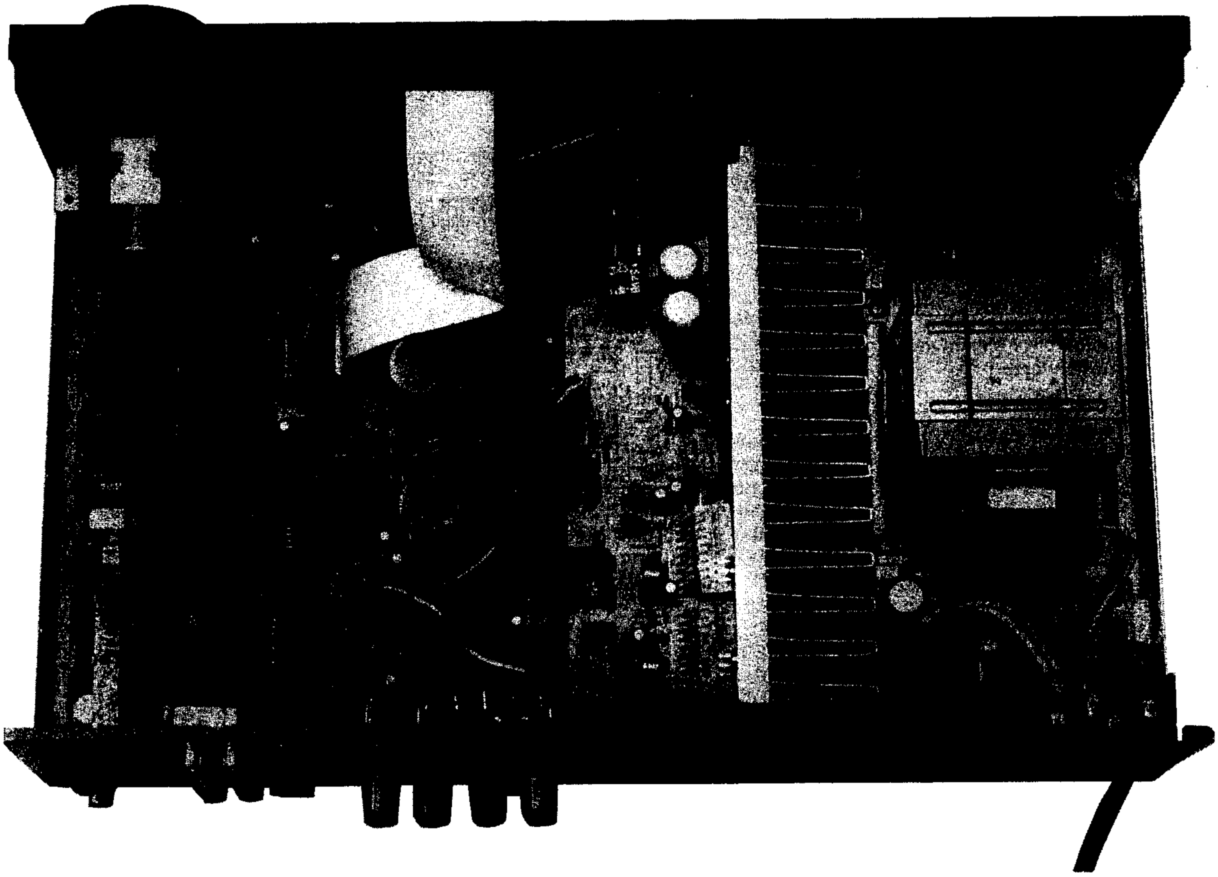
System remote control

RC-195:	Total buttons:	28
	DENON system code	
	CD player:	6 buttons } (SWITCHED)
	Cassette deck:	6 buttons
	AVR-900 fixed codes:	22 buttons
	Batteries:	R6P/AA Type (two batteries)
	External dimensions:	51 (W) × 175 (H) × 18.5 (D) mm (2" × 6-57/64" × 47/64")
	Weight:	100 g (Approx. 3.5 oz) (including batteries)

* For purposes of improvement, specifications and design are subject to change without notice.

WIRE ARRANGEMENT

In case of wires require unclasping or loosening to move the location to perform adjustment or part replacement, be sure to rearrange them neatly to restore properly in the same location as they were originally placed, or causing to produce a noise may occasionally occur.

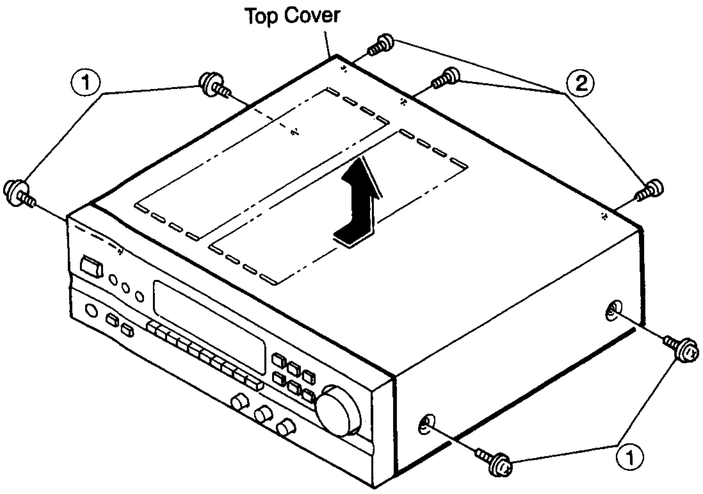


DISASSEMBLY

(To reassemble reverse disassembly)

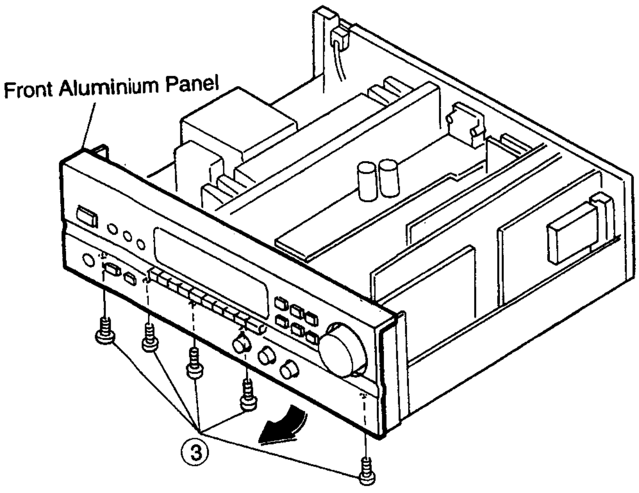
1. Top Cover

Remove 4 screws ① and 3 screws ② .


Top Cover
①
②
①

2. Front Aluminium Panel

Remove 5 screws ③ .

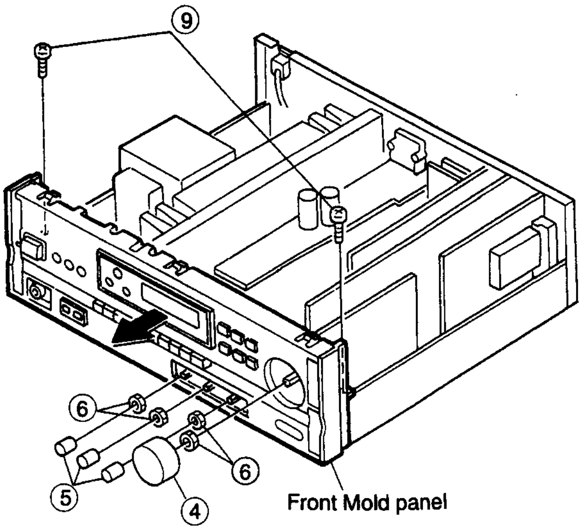

Front Aluminium Panel
③

3. Front Mold Panel

(1) Pull out Volume knob ④ and 3 round knobs ⑤ .

(2) Remove 4 nuts ⑥ .

(3) Remove 2 screws ⑨ .

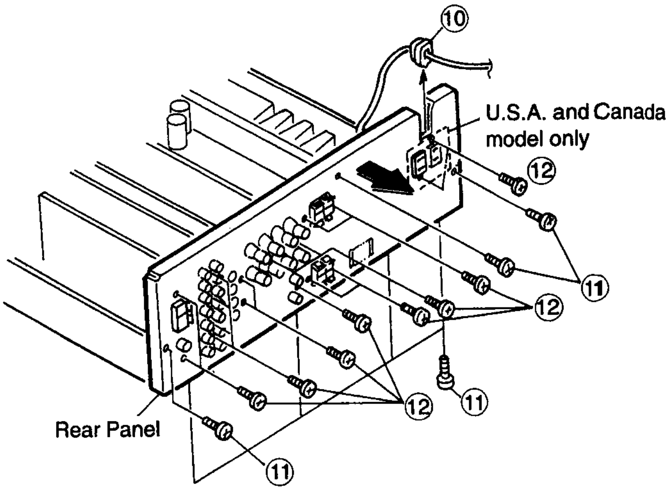

⑨
⑥
⑥
⑤
④
Front Mold panel

4. Rear Panel

(1) Disconnect cord bush ⑩ .

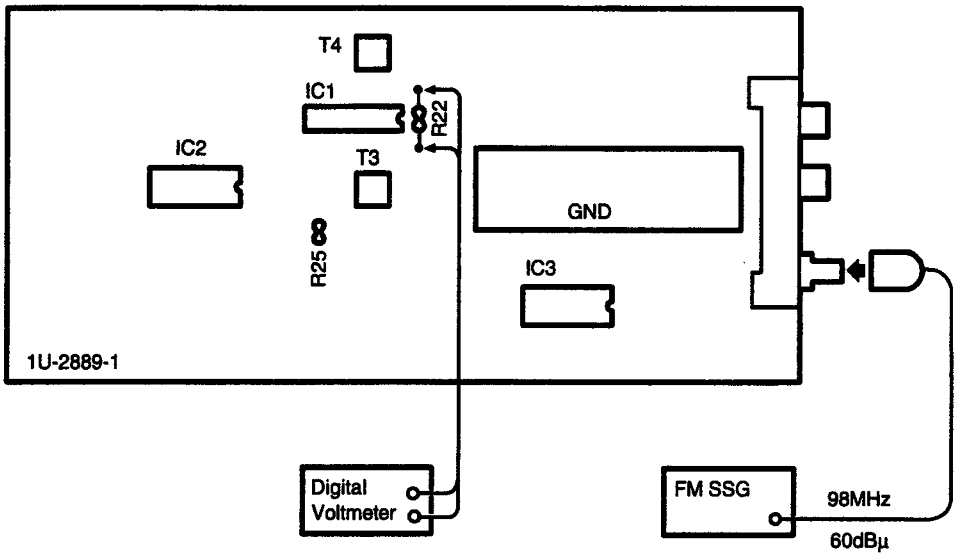
(2) Remove 7 screws ⑪ , and 17 screws ⑫ .

* Screws ⑫ is tighten.


⑩
U.S.A. and Canada model only
⑫
⑪
⑫
⑫
⑪
Rear Panel
⑪

CONNECTION DIAGRAM OF MEASURING INSTRUMENTS

● FM SECTION



Adjust T4 potential difference across R22 should be within 50mV.

● Initiating (Memory clearing) Method

To clear memory contents of microcomputer and restore to the initial state, take the following steps;

1. Press power switch, turn off power of the unit, and set to standby mode.
2. Pull out power cord from wall outlet temporarily.
3. Insert power cord into outlet while simultaneously pressing two keys of TUNER and VIDEO SELECT.
4. Press power switch to confirm that memory contents are cleared.

By completion of the above, the initial state is restored. In case the memory can not be cleared due to some reasons, repeat steps 1 through 3.

● AUDIO SECTION

Idling Current (1U-2865-1)

Required measurement equipment: DC Voltmeter

Arrangement

(1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room temperature 15°C ~ 30°C. (59°F ~ 86°F).

(2) Presetting

● POWER (Power source switch)	→ ON
● MODE (Mode buttton)	→ STEREO
● FUNCTION (Function button)	→ CD
● VOLUME (Volume control)	→ 0: fully counterclockwise (↺ min.)
● BASS, TREBLE (Tone control)	→ 0: (Controls to center)
● SPEAKERS (Speaker terminal)	→ No load (Do not connect speaker, dummy resistor, etc.)

Adjustment

(1) Remove top cover and set VR401, VR301 and VR302 of 1U-2865-1 or 1U-2865A-1 (Main Unit) at counterclockwise fully.

(2) Connect DC Voltmeter to test points (Lch T.P.301, Rch T.P.302, CENTER ch T.P.401).

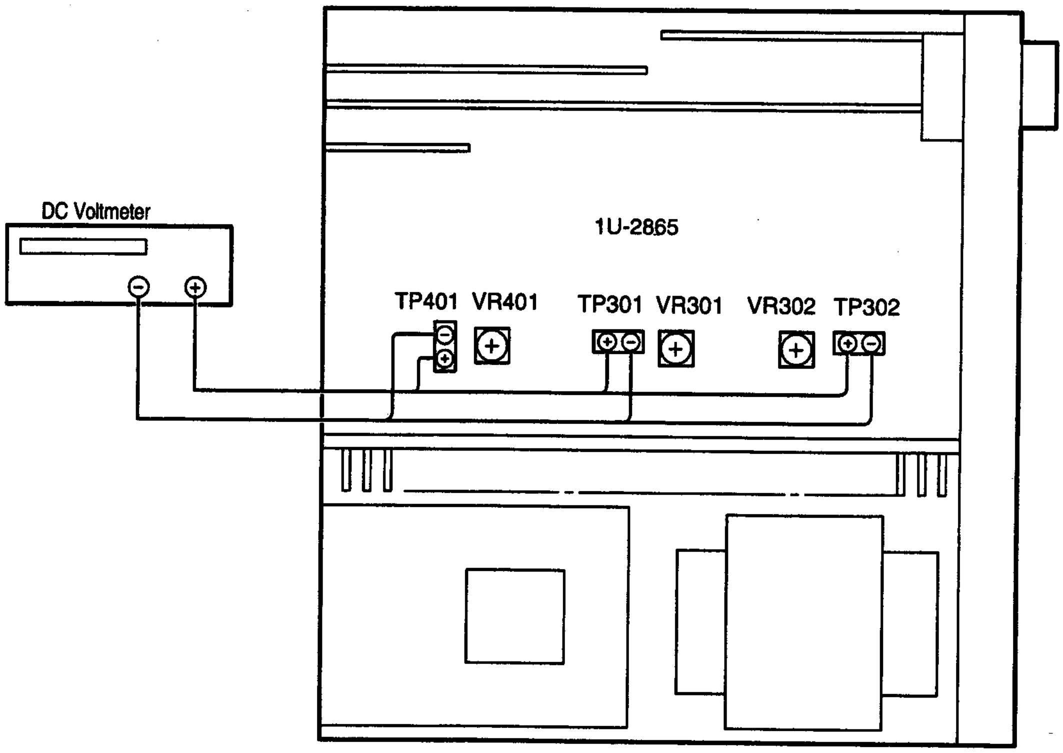
(3) Connect power cord to AC Line, and turn power switch "ON".

(4) Allow 15 minutes, and turn VR301, VR302 and VR401 clockwise (↻) and adjust the TEST POINTS voltage to 1.5 mV ± 0.5 mV DC.

(5) After 2 minutes from preset, turn VR301, VR302 and VR401 to set the voltage to 3 mV ± 0.5mV DC.

1U-2865-1 Main Unit (Component Side)

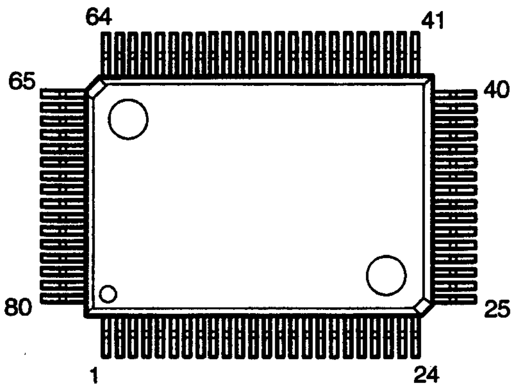
	UNIT No.
U.S.A. and CANADA	1U-2865
EUROPE, U.K., Asia	1U-2865A



SEMICONDUCTORS

● IC's

TMP87CM71F-6314 (IC701)


64
41
65
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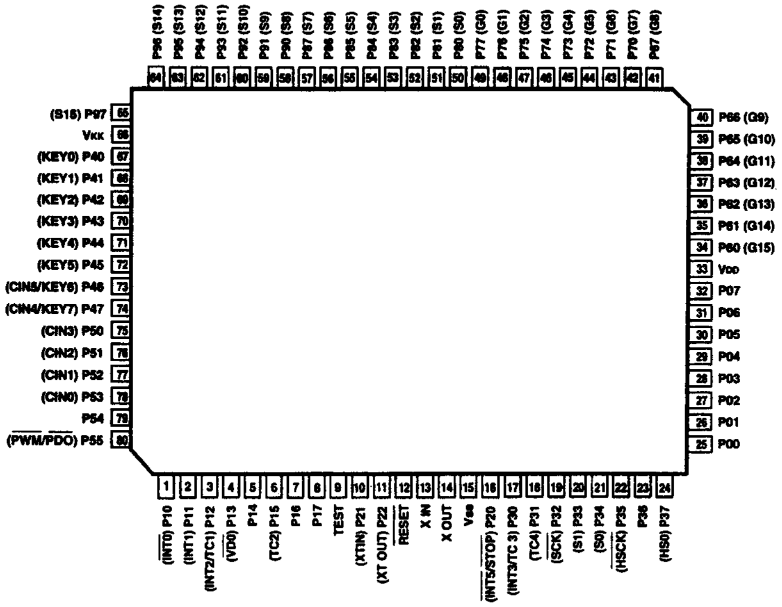
80
25
1
24


P96 (S14)
P95 (S13)
P94 (S12)
P93 (S11)
P92 (S10)
P91 (S9)
P90 (S8)
P87 (S7)
P86 (S6)
P85 (S5)
P84 (S4)
P83 (S3)
P82 (S2)
P81 (S1)
P80 (S0)
P77 (G0)
P76 (G1)
P75 (G2)
P74 (G3)
P73 (G4)
P72 (G5)
P71 (G6)
P70 (G7)
P67 (G8)
(S15) P97
VKK
(KEY0) P40
(KEY1) P41
(KEY2) P42
(KEY3) P43
(KEY4) P44
(KEY5) P45
(CIN5/KEY6) P46
(CIN4/KEY7) P47
(CIN3) P50
(CIN2) P51
(CIN1) P52
(CIN0) P53
P54
(PWM/PDO) P55
P66 (G9)
P65 (G10)
P64 (G11)
P63 (G12)
P62 (G13)
P61 (G14)
P60 (G15)
VDD
P07
P06
P05
P04
P03
P02
P01
P00
(INT0) P10
(INT1) P11
(INT2/TC1) P12
(VD0) P13
P14
(TC2) P15
P16
P17
TEST
(XTIN) P21
(XT OUT) P22
RESET
X IN
X OUT
Vss
(INT5/STOP) P20
(INT3/TC 3) P30
(TC4) P31
(SCK) P32
(S1) P33
(S0) P34
(HSCK) P35
P36
(HS0) P37
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TMP87CM71F-6314 Terminal Function

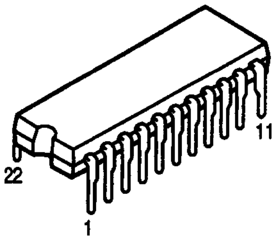
Pin No.	Symbol	I/O	Type	Op	Det	Res	Ini	Function
1	STOP	I	—	Eu	Lv	Z	—	Detect power stop ("L" at power stop)
2	PROTECTION	I	—	Eu	E&L	Z	—	Protection input ("H" at protection)
3	EXP. DATA	O	C	—	—	Z	L	Port expand data output
4	EXP. CK	O	C	—	—	Z	L	Port expand clock output
5	EXP. STB	O	C	—	—	Z	L	Port expand strobe output
6	VR. CK	O	C	—	S	Z	L	TC9176 (electron VR) control clock output
7	VR. DATA	O	C	—	S	Z	L	TC9176 (electron VR) control data output
8	VR. STB	O	C	—	—	Z	L	TC9176 (electron VR) control strobe output
9	TEST	I	—	GND	—	—	—	Connect to ground
10	TUNED	I	—	Eu	Lv	Z	—	"L" at stereo receive
11		O	—	—	—	Z	L	Fixed output on "L"
12	RESET	I	—	Eu	Lv	Z	—	Reset input
13	X IN	I	—	—	—	—	—	Oscillating circuit (4 MHz)
14	X OUT	O	—	—	—	—	—	Oscillating circuit (4 MHz)
15	GND	I	—	GND	—	—	—	Ground
16	RDS START	I	—	Eu	Ed	Z	—	RDS data, Start signal input (LC704)*
17	REMOCON	I	—	Eu	E&L	Z	—	Remote control signal input
18	STEREO	I	—	Eu	—	Z	L	"L" at TUNER stereo receive
19	RDS. CK	I	—	Eu	S	Z	—	RDS clock input (LC7074)*
20	RDS. DATA	I	—	Eu	S	Z	—	RDS data input (LC7074)*
21	RDS. RESET	O	N	Eu	—	Z	L	RDS reset signal output (LC7074)*
22	PLL. CK	O	N	Eu	—	Z	L	LM7001 control clock output
23	PLL. STB	O	N	Eu	—	Z	L	LM7001 control strobe output
24	PLL. DATA	O	N	Eu	—	Z	L	LM7001 control data output
25	FUNC. DATA	O	C	—	—	Z	L	LC7822 (Function IC) control data output
26	FUNC. CK	O	C	—	—	Z	L	LC7822 (Function IC) control clock output
27	FUNC. STB	O	C	—	—	Z	L	LC7822 (Function IC) control strobe output
28	ST/MONO	O	C	—	—	Z	L	TUNER STEREO/MONO control output ("L" at STEREO)
29	POWER OFF	O	C	—	—	Z	L	"L" at ON
30	VOL. DOWN	O	C	—	—	Z	L	Electrically-driven volume control output (BA6208S)

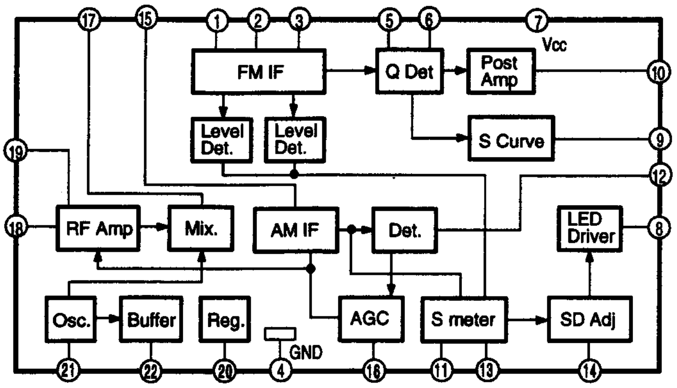
* port is fixed on "L" at RDS non-selection mode.

Pin No.	Symbol	I/O	Type	Op	Det	Res	Ini	Function
31	VOL. UP	O	C	—	—	Z	L	Electrically-driven volume control output (BA6208S)
32	SP-FRONT	O	C	Ed	—	Z	H	Front speaker relay control output
33	VDD	I	—	—	—	—	—	Connect to +5V
34	LED. PRO	O	P	Id	—	L	L	DOLBY PROLOIC indecating LED drive output ("H" at light)
35	LED. STBY	O	P	Id	—	L	L	Standby indecating LED drive output ("H" at light)
36	1G	O	P	Id	S	L	L	FLD control output
37	2G	O	P	Id	S	L	L	FLD control output
38	3G	O	P	Id	S	L	L	FLD control output
39	4G	O	P	Id	S	L	L	FLD control output
40	5G	O	P	Id	—	L	L	FLD control output
41	6G	O	P	Id	—	L	L	FLD control output
42	7G	O	P	Id	—	L	L	FLD control output
43	8G	O	P	Id	—	L	L	FLD control output
44	9G	O	P	Id	—	L	L	FLD control output
45	10G	O	P	Id	—	L	L	FLD control output
46	11G	O	P	Id	—	L	L	FLD control output
47	12G	O	P	Id	—	L	L	FLD control output
48	13G	O	P	Id	—	L	L	FLD control output
49	14G	O	P	Id	—	L	L	FLD control output
50	P (a)	O	P	Id	—	L	L	FLD control output
51	P (b)	O	P	Id	—	L	L	FLD control output
52	P (c)	O	P	Id	—	L	L	FLD control output
53	P (d)	O	P	Id	—	L	L	FLD control output
54	P (e)	O	P	Id	—	L	L	FLD control output
55	P (f)	O	P	Id	—	L	L	FLD control output
56	P (g)	O	P	Id	—	L	L	FLD control output
57	P (h)	O	P	Id	—	L	L	FLD control output
58	P (j)	O	P	Id	—	L	L	FLD control output
59	P (k)	O	P	Id	—	L	L	FLD control output
60	P (m)	O	P	Id	—	L	L	FLD control output
61	P (n)	O	P	Id	—	L	L	FLD control output
62	P (p)	O	P	Id	—	L	L	FLD control output
63	P (q)	O	P	Id	—	L	L	FLD control output
64	P (r)	O	P	Id	—	L	L	FLD control output
65	P (s)	O	P	Id	—	L	L	FLD control output
66	VKK	I	—	—	—	—	—	Connect to Vkk
67	DD. CK	O	N	Eu	—	Z	H	NJU9701G (Delay time) control clock output
68	DD. REQ	O	N	Eu	—	Z	H	NJU9701G (Delay time) control request output
69	DD. DATA	O	N	Eu	—	Z	H	NJU9701G (Delay time) control data output
★70	MODE2	I	N	Id	—	Z	—	Select occurring or no RDS function ("H" at occurring RDS function)★
71	VIDEO A	O	N	Eu	—	Z	H	BU4066 (Video shift) control output ("L" at selecting)
72	VIDEO B	O	N	Eu	—	Z	H	BU4066 (Video shift) control output ("L" at selecting)
73	KEY 5	I	—	Eu	Lv	Z	—	Button input 5
74	KEY 4	I	—	Eu	Lv	Z	—	Button input 4
75	KEY 3	I	—	Eu	Lv	Z	—	Button input 3
76	KEY 2	I	—	Eu	Lv	Z	—	Button input 2
77	KEY 1	I	—	Eu	Lv	Z	—	Button input 1
78	MODE 1	I	—	Eu	Lv	Z	—	Model version change input
79	TU MUTE	O	N	Eu	—	Z	L	Tuner muting output ("L" at muting)
80		O	N	Eu	—	Z	H	Fixed output on "H"

★ port is in active software pull down mode.

LA1265 (S)
(IC001)

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Q Det
Post Amp
Vcc
Level Det.
Level Det.
S Curve
RF Amp
Mix.
AM IF
Det.
LED Driver
Osc.
Buffer
Reg.
GND
AGC
S meter
SD Adj
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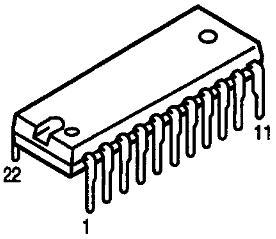
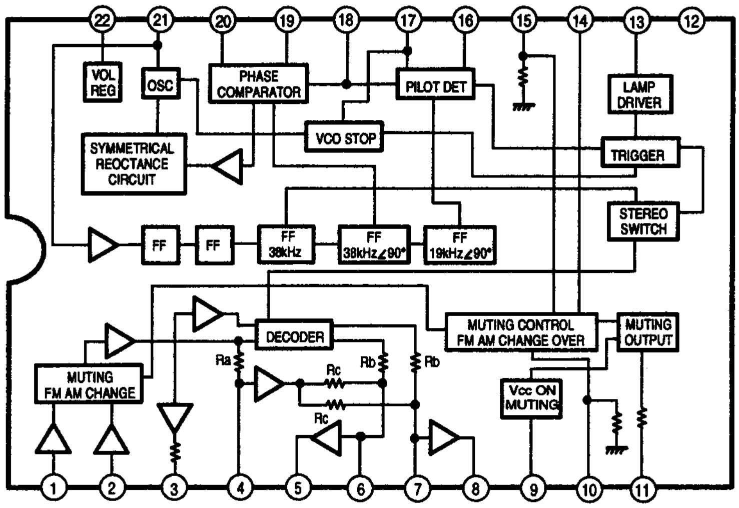
LA3401
(IC002)

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OSC
PHASE COMPARATOR
PILOT DET
LAMP DRIVER
VCO STOP
TRIGGER
SYMMETRICAL REOCTANCE CIRCUIT
STEREO SWITCH
FF
FF
FF 38kHz
FF 38kHz∠90°
FF 19kHz∠90°
DECODER
MUTING CONTROL FM AM CHANGE OVER
MUTING OUTPUT
MUTING FM AM CHANGE
Vcc ON MUTING
Ra
Rb
Rb
Rc
Rc
①
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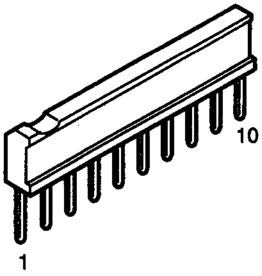
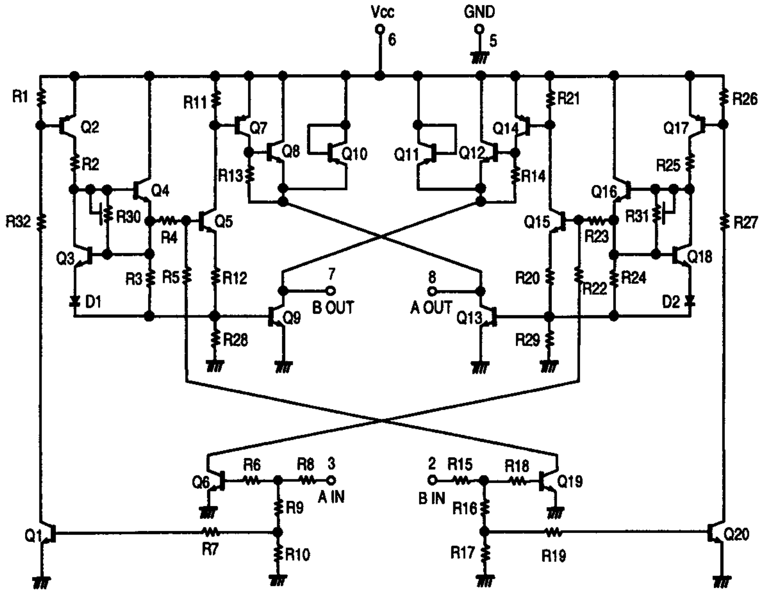
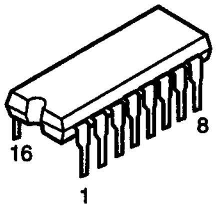
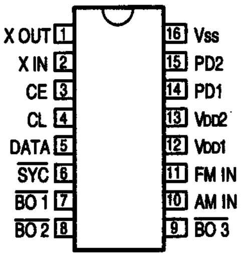
BA6208S
(IC264)




Vcc
6
GND
5
R1
Q2
R2
Q4
R30
R4
Q5
R32
Q3
R3
R5
R12
D1
R28
R11
Q7
Q8
Q10
R13
Q9
7
B OUT
8
A OUT
Q11
Q12
Q13
Q14
R14
R21
Q15
R20
R22
R23
R29
Q16
R31
R24
Q17
R25
Q18
D2
R26
R27
Q6
R6
R8
3
A IN
R9
R7
R10
Q1
2
R15
B IN
R16
R18
Q19
R17
R19
Q20

LM7001 (IC003)

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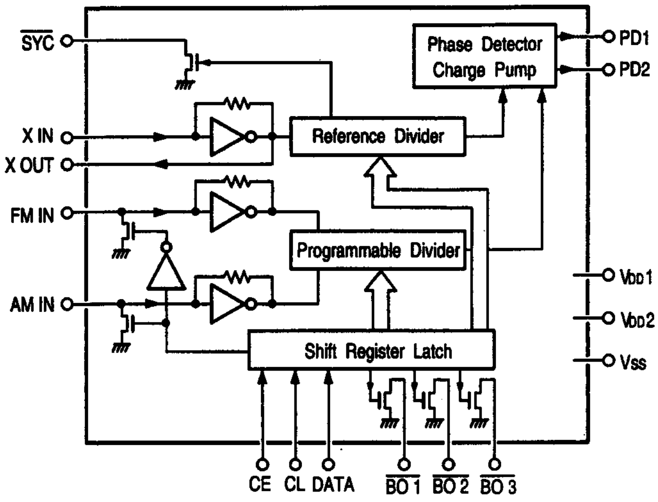
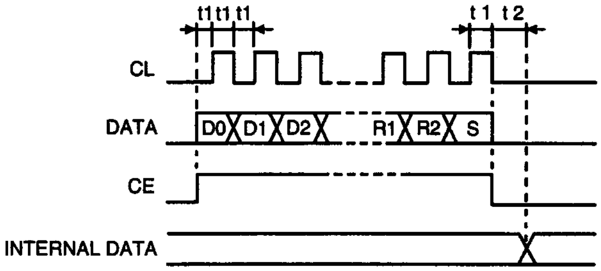
X IN 2
CE 3
CL 4
DATA 5
SYC 6
BO1 7
BO2 8
16 Vss
15 PD2
14 PD1
13 VDD2
12 VDD1
11 FM IN
10 AM IN
9 BO3


SYC
X IN
X OUT
FM IN
AM IN
Phase Detector
Charge Pump
Reference Divider
Programmable Divider
Shift Register Latch
PD1
PD2
VDD1
VDD2
Vss
CE
CL
DATA
BO1
BO2
BO3

Terminal Description

$\overline{\text{SYC}}$	: Clock for controller (400 kHZ).
XIN, XOUT	: X'tal OSC (7.2 MHz).
FMIN, AMIN	: Station oscillation signal input.
CE, CL, DATA	: Data input.
$\overline{\text{BO1}}$, $\overline{\text{BO2}}$, $\overline{\text{BO3}}$,	: Band data output. $\overline{\text{BO1}}$ is feasible for time base output (8 Hz).
VDD1, VDD2, Vss	: Power supply. (VDD2 is for back-up).
PD1, PD2	: Charge pump output.

Data input


t1 t1 t1
t1 t2
CL
DATA
D0
D1
D2
R1
R2
S
CE
INTERNAL DATA

t 1 > 1.5 µs
t 2 < 1.5 µs (X'tal at 7.2MHz)

———— Input from D0.

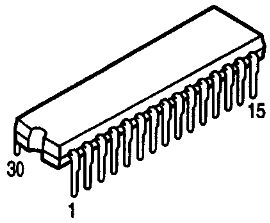
D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	T0	T1	B0	B1	B2	TB	R0	R1	R2	S

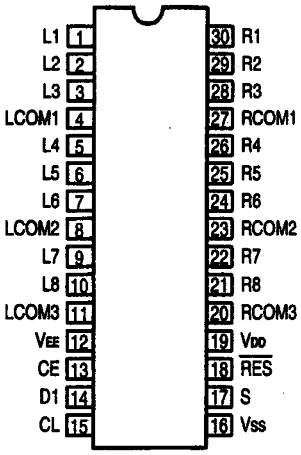
(1) D0 (LSB)~D13 (MSB): Frequency dividend data
For FMIN, use D0~D13; for AMIN, use D4~D13.

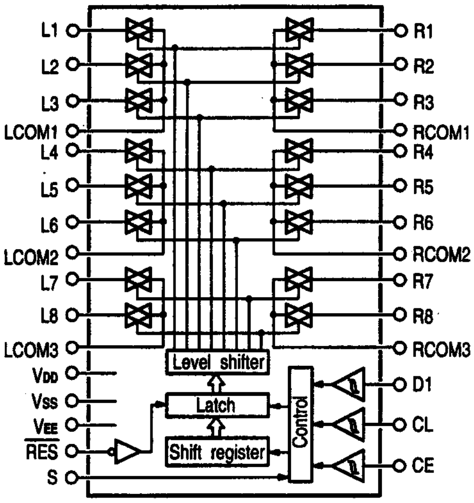
D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	
1	0	1	0	0	0	0	0	0	1	0	1	1	1	→ FMIN Frequency dividend nnumber = 14853
LSB													MSB	
×	×	×	×	0	0	0	0	0	1	0	1	1	1	→ FMIN Frequency dividend nnumber = 928
				LSB									MBS	

(2) TO, T1: For test of LSI (0, 0)

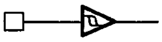
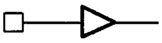
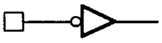
LC7822 (IC102)



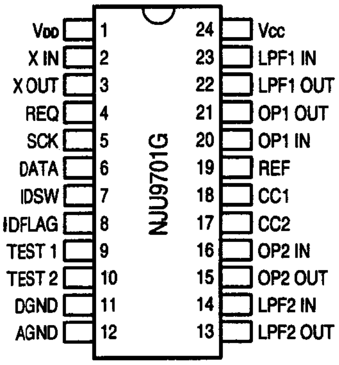

L1 1
L2 2
L3 3
LCOM1 4
L4 5
L5 6
L6 7
LCOM2 8
L7 9
L8 10
LCOM3 11
VEE 12
CE 13
D1 14
CL 15
30 R1
29 R2
28 R3
27 RCOM1
26 R4
25 R5
24 R6
23 RCOM2
22 R7
21 R8
20 RCOM3
19 VDD
18 RES
17 S
16 Vss

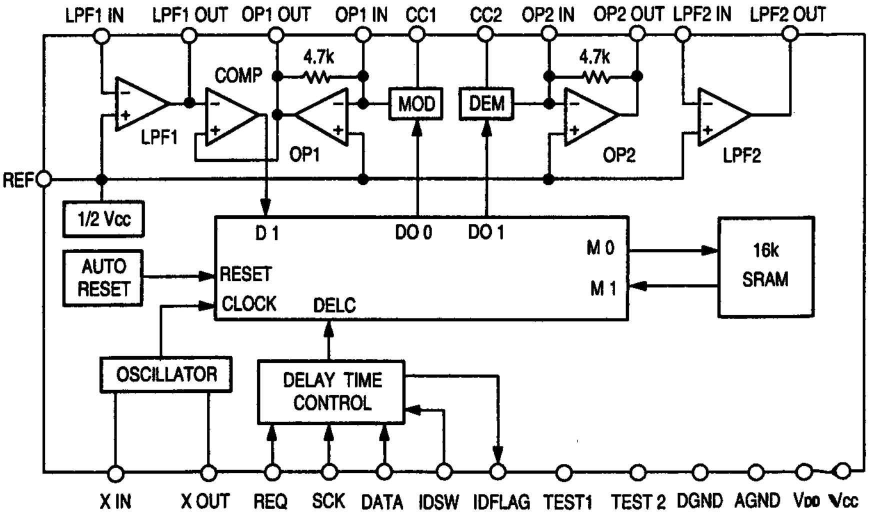

L1
L2
L3
LCOM1
L4
L5
L6
LCOM2
L7
L8
LCOM3
VDD
Vss
VEE
RES
S
R1
R2
R3
RCOM1
R4
R5
R6
RCOM2
R7
R8
RCOM3
D1
CL
CE
Level shifter
Latch
Shift register
Control

LC7822 Terminal Function

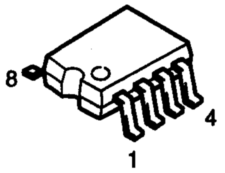
<table>
<tr><th>Name of Terminal</th><th>I/O</th><th>Equivalent Internal Circuit</th><th>Function of Terminal</th></tr>
<tr><td>VDD, Vss, VEE</td><td></td><td></td><td>Power terminal.</td></tr>
<tr><td>L1 ~ L8, R1 ~ R8
LCOM1 ~ LCOM4,
BCOM1 ~ BCOM4</td><td></td><td>Refer to block diagram</td><td>In/Out terminal of analog switch.</td></tr>
<tr><td>CL, DI, CE</td><td>I</td><td></td><td>Serial data input terminal (Schmidt buffer).
CL = Clock input terminal.
DI = Data input terminal.
CE = Chip enable terminal.</td></tr>
<tr><td>S</td><td>I</td><td></td><td>Selection terminal for using of two.
Address will be shifted as per below table when switching S terminal to L or H.
<table>
<tr><th rowspan="2">Name of Item</th><th rowspan="2">S Terminal</th><th colspan="4">Address</th></tr>
<tr><th>A0</th><th>A1</th><th>A2</th><th>A3</th></tr>
<tr><td rowspan="2">LC7822</td><td>L</td><td>0</td><td>1</td><td>0</td><td>1</td></tr>
<tr><td>H</td><td>1</td><td>1</td><td>0</td><td>1</td></tr>
</table></td></tr>
<tr><td>$\overline{\text{RES}}$</td><td>I</td><td></td><td>Reset terminal.
Condition of analog switch is not fixed at the time of turning on the power.
When shift this termnal to L, all analog switches become OFF.</td></tr>
</table>

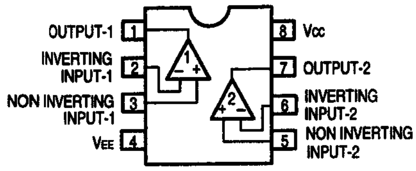
NJU9701G (IC202)


VDD 1
X IN 2
X OUT 3
REQ 4
SCK 5
DATA 6
IDSW 7
IDFLAG 8
TEST 1 9
TEST 2 10
DGND 11
AGND 12
24 Vcc
23 LPF1 IN
22 LPF1 OUT
21 OP1 OUT
20 OP1 IN
19 REF
18 CC1
17 CC2
16 OP2 IN
15 OP2 OUT
14 LPF2 IN
13 LPF2 OUT
NJU9701G

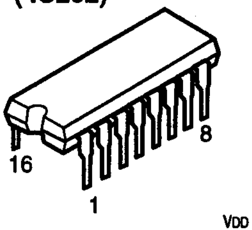

LPF1 IN
LPF1 OUT
OP1 OUT
OP1 IN
CC1
CC2
OP2 IN
OP2 OUT
LPF2 IN
LPF2 OUT
4.7k
4.7k
COMP
LPF1
OP1
MOD
DEM
OP2
LPF2
REF
1/2 Vcc
AUTO RESET
D 1
DO 0
DO 1
M 0
M 1
RESET
CLOCK
DELC
16k SRAM
OSCILLATOR
DELAY TIME CONTROL
X IN
X OUT
REQ
SCK
DATA
IDSW
IDFLAG
TEST1
TEST 2
DGND
AGND
VDD
Vcc

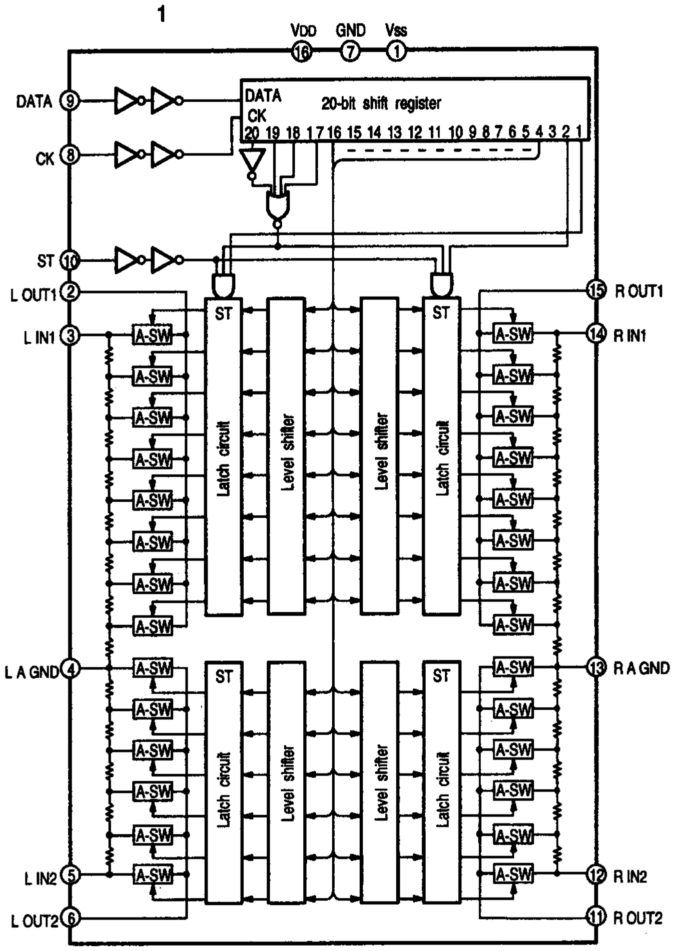
BA4558F (IC101, 103)



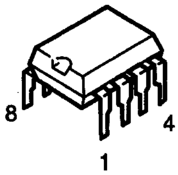

OUTPUT-1 1
INVERTING INPUT-1 2
NON INVERTING INPUT-1 3
VEE 4
8 Vcc
7 OUTPUT-2
6 INVERTING INPUT-2
5 NON INVERTING INPUT-2
1
2

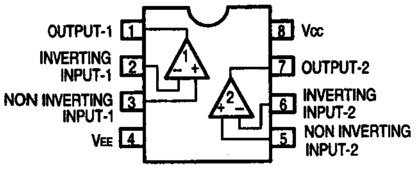
TC9176P (IC262)



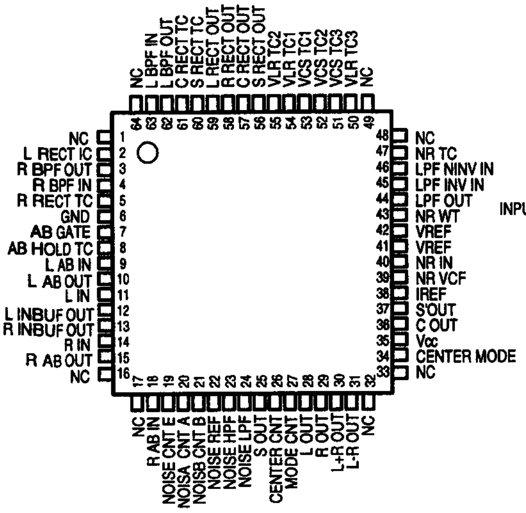

VDD 16
GND 7
Vss 1
DATA 9
CK 8
ST 10
DATA
CK
20-bit shift register
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
L OUT1 2
L IN1 3
L A GND 4
L IN2 5
L OUT2 6
15 R OUT1
14 R IN1
13 R A GND
12 R IN2
11 R OUT2
A-SW
ST
Latch circuit
Level shifter

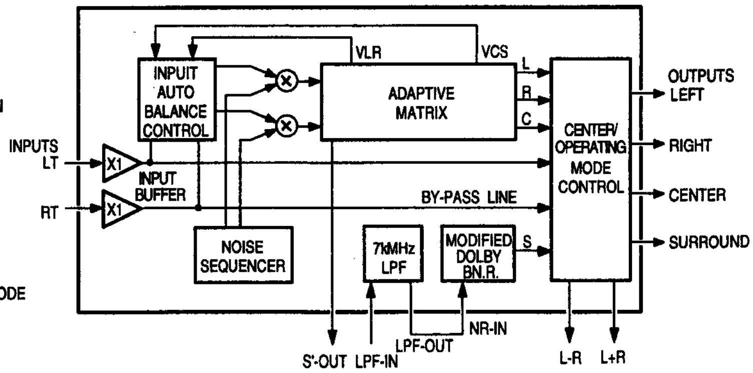
BA4558 (IC261, 236)
BA15218 (IC451)



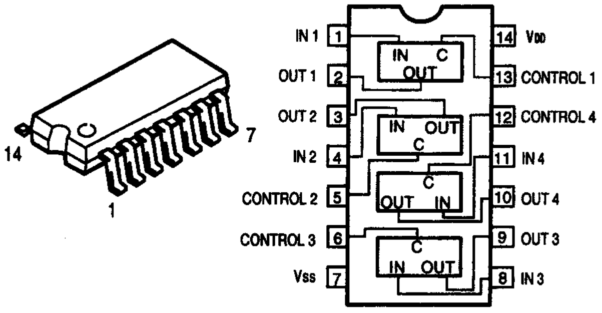

OUTPUT-1 1
INVERTING INPUT-1 2
NON INVERTING INPUT-1 3
VEE 4
8 Vcc
7 OUTPUT-2
6 INVERTING INPUT-2
5 NON INVERTING INPUT-2
1
2

DDSC-A (IC201)

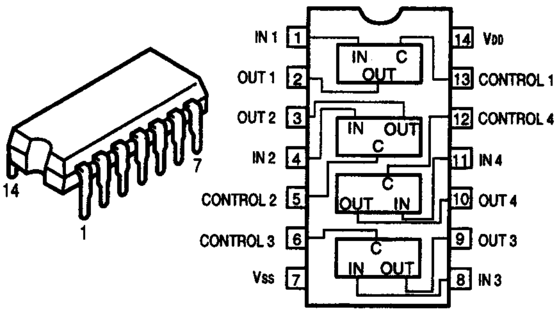

NC 1
L RECT IC 2
R BPF OUT 3
R BPF IN 4
R RECT TC 5
GND 6
AB GATE 7
AB HOLD TC 8
L AB IN 9
L AB OUT 10
L IN 11
L INBUF OUT 12
R INBUF OUT 13
R IN 14
R AB OUT 15
NC 16
17 NC
18 R AB IN
19 NOISE CNT E
20 NOISA CNT A
21 NOISB CNT B
22 NOISE REF
23 NOISE HPF
24 NOISE LPF
25 S OUT
26 CENTER CNT
27 MODE CNT
28 L OUT
29 R OUT
30 L+R OUT
31 L-R OUT
32 NC
33 NC
34 CENTER MODE
35 Vcc
36 C OUT
37 S'OUT
38 IREF
39 NR VCF
40 NR IN
41 VREF
42 VREF
43 NR WT
44 LPF OUT
45 LPF INV IN
46 LPF NINV IN
47 NR TC
48 NC
49 NC
50 VLR TC3
51 VCS TC3
52 VCS TC2
53 VCS TC1
54 VLR TC1
55 VLR TC2
56 S RECT OUT
57 C RECT OUT
58 R RECT OUT
59 L RECT OUT
60 S RECT TC
61 C RECT TC
62 L BPF OUT
63 L BPF IN
64 NC


INPUIT AUTO BALANCE CONTROL
VLR
VCS
ADAPTIVE MATRIX
L
R
C
CENTER/ OPERATING MODE CONTROL
OUTPUTS
LEFT
RIGHT
CENTER
SURROUND
INPUTS
LT
RT
X1
X1
INPUT BUFFER
BY-PASS LINE
NOISE SEQUENCER
7kMHz LPF
MODIFIED DOLBY BN.R.
S
NR-IN
LPF-OUT
S'-OUT
LPF-IN
L-R
L+R

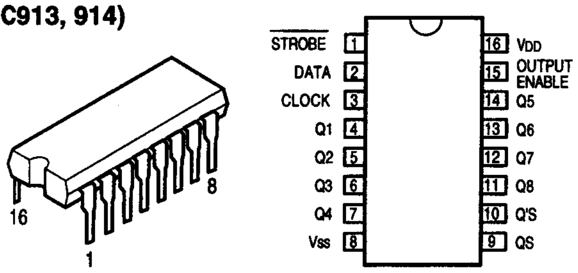
BU4066BCF
(IC203, 205)


14
7
1
IN 1 1
OUT 1 2
OUT 2 3
IN 2 4
CONTROL 2 5
CONTROL 3 6
Vss 7
14 VDD
13 CONTROL 1
12 CONTROL 4
11 IN 4
10 OUT 4
9 OUT 3
8 IN 3
IN C OUT
IN OUT C
C OUT IN
C IN OUT

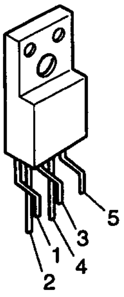
BU4066BC
(IC601)


14
7
1
IN 1 1
OUT 1 2
OUT 2 3
IN 2 4
CONTROL 2 5
CONTROL 3 6
Vss 7
14 VDD
13 CONTROL 1
12 CONTROL 4
11 IN 4
10 OUT 4
9 OUT 3
8 IN 3
IN C OUT
IN OUT C
C OUT IN
C IN OUT

µPD4094BC
(IC913, 914)

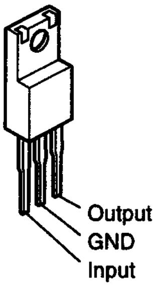

16
8
1
STROBE 1
DATA 2
CLOCK 3
Q1 4
Q2 5
Q3 6
Q4 7
Vss 8
16 VDD
15 OUTPUT ENABLE
14 Q5
13 Q6
12 Q7
11 Q8
10 Q'S
9 QS

SI-18751
(IC501, 502)

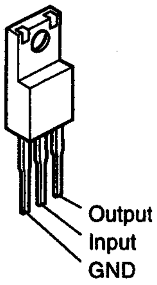


1: +IN
2: - IN
5: -VEE
4: OUTPUT
5: +Vcc

NJM7806FA (S) (IC551)
NJM7812FA (S) (IC503)

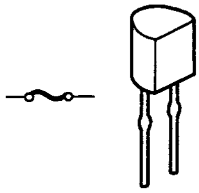

Output
GND
Input

NJM7912FA
(IC504)


Output
Input
GND

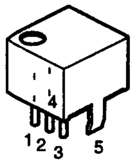
● IC PROTECTORS

ICP-N15 (IC552)
ICP-N20 (IC505 ,506)

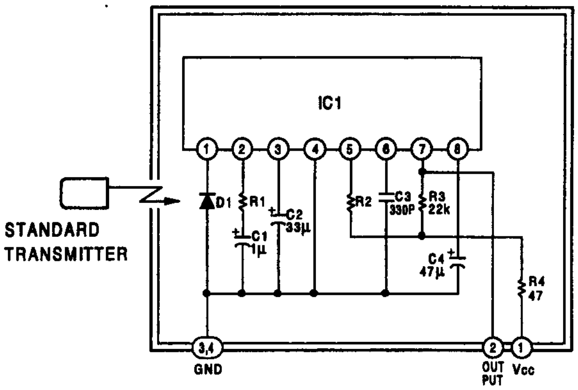


● OTHERS

SBX1610-52 (Remote Control Sensor)



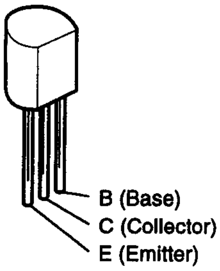
1. Vcc
2. Output
3. GND
4. Case Fin
5. Case Fin


STANDARD TRANSMITTER
IC1
1
2
3
4
5
6
7
8
D1
R1
C1 1µ
C2 33µ
R2
C3 330P
R3 22k
C4 47µ
R4 47
3,4 GND
2 OUT PUT
1 Vcc

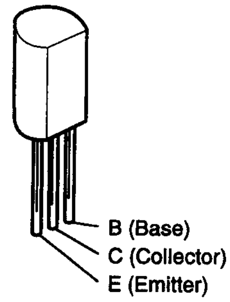
IC1 : CX20106A Chip
D1 : PIN Photo Diode Chip
C1,C2,C4 : Aluminum Electrolytic Capacitor
C3 : SL Characteristic ±5%
R1 : Gain Adjuster
R2 : fo Adjuster ±1% USE
R3, R4 : ±5%

●TRANSISTORS

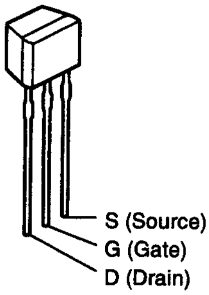
2SA970 (BL)
2SA988 (E/F)
2SC1015 (GR)
2SC1815 (Y),(BL)
2SC1841 (E/F)
2SC2058 (Q)
2SC2878 (A/B)


B (Base)
C (Collector)
E (Emitter)

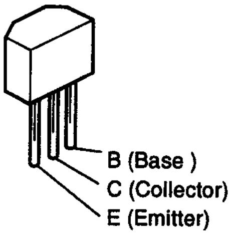
2SB647A (C)
2SB1041 (R)
2SD667A (C)
2SD1292 (R)


B (Base)
C (Collector)
E (Emitter)

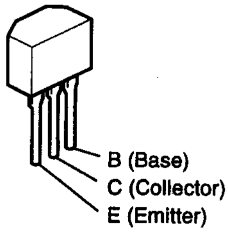
2SK365 (BL/RG)
(FET)


S (Source)
G (Gate)
D (Drain)

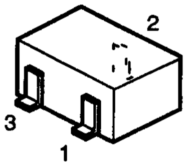
2SA933S (S)
2SC1740S (S)


B (Base)
C (Collector)
E (Emitter)

DTA114ES
DTA114TS
DTA143ES
DTC114ES
DTC143ES
DTC144TS
DTC323TS

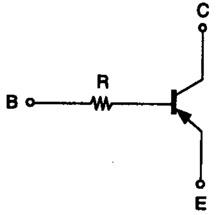

B (Base)
C (Collector)
E (Emitter)

DTA144EK
DTC143EK
DTC144EK



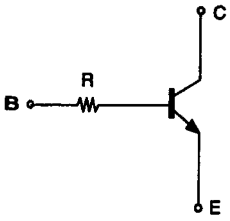
1: GND/Emitter
2: Out/Collector
3: In/Base

PNP Type



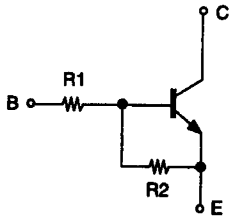
	R
DTA114TS	10kohm

NPN Type



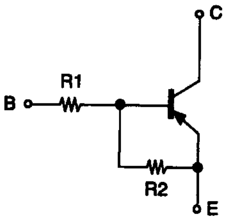
	R
DTC144TS	4.7kohm
DTC323TS	2.2kohm

NPN Type



	R1	R2
DTC114ES	10kohm	10kohm
DTC143ES	4.7kohm	4.7kohm
DTC143EK	4.7kohm	4.7kohm
DTC144EK	47kohm	47kohm

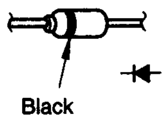
PNP Type



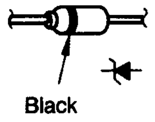
	R1	R2
DTA114ES	10kohm	10kohm
DTA143ES	4.7kohm	4.7kohm
DTA144EK	47kohm	47kohm

● DIODES (included LED)

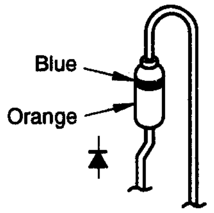
1SS252
1S2471



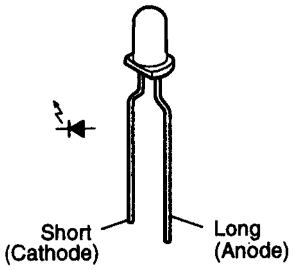
MTZJ3.3A MTZJ8.2B
MTZJ6.2A MTZ27D
MTZJ7.5A



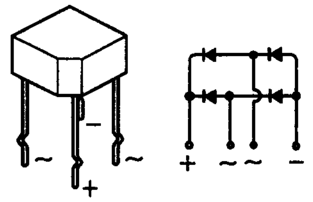
1SR35-200A


Blue
Orange

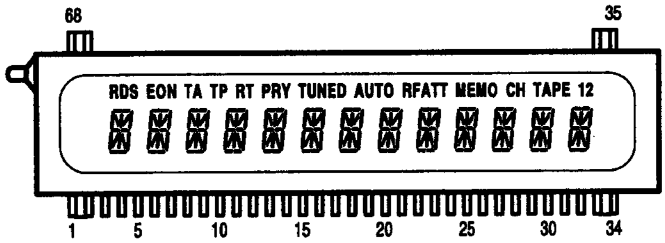
SEL1210S (Red)

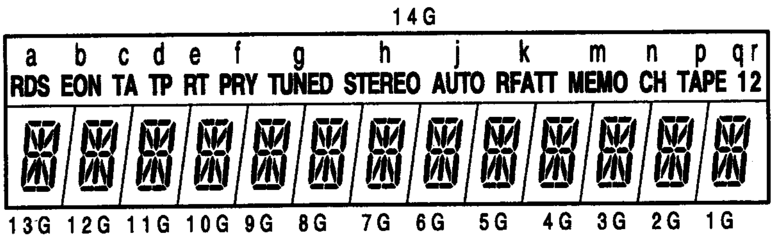

Short
(Cathode)
Long
(Anode)

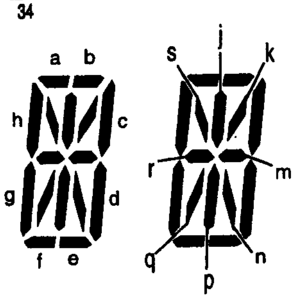
S4VB20



FL (FIP14AM7R)
(FL701)


68
35
RDS EON TA TP RT PRY TUNED AUTO RFATT MEMO CH TAPE 12
1
5
10
15
20
25
30
34


14G
a b c d e f g h j k m n p q r
RDS EON TA TP RT PRY TUNED STEREO AUTO RFATT MEMO CH TAPE 12
13G 12G 11G 10G 9G 8G 7G 6G 5G 4G 3G 2G 1G


a
b
h
c
g
d
f
e
s
j
k
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m
q
p
n

TERMIAL CONNECTION
(UPPER)

TERMINAL No.	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52			
ELECTRODE	F1	F1	F1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP			
TERMINAL No.				51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
ELECTRODE				NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	F2	F2

(LOWER)

TERMINAL No.				18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
ELECTRODE				P s	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	F2	F2
TERMINAL No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
ELECTRODE	F1	F1	P s	P r	P q	P p	P n	P m	P k	P j	P h	P g	P f	P e	P d	P c	P b			

Notes: F: Filament G: Grid P: Anode NP: No-Pin

NOTE FOR PARTS LIST

- Part indicated with the mark " ◉ " are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol ⚠ ■ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

• Resistors

Ex.:	RN	14K	2E	182	G	FR
	Type	Shape and performance	Power	Resistance	Allowable error	Others

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

*** Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
2 — Indicates number of zeros after effective number.
1 8 — 2-digit effective number.

• Units: ohm

1 R 2 ⇒ 1.2 ohm
2 — 1-digit effective number.
1 R — 2-digit effective number, decimal point indicated by R.

• Units: ohm

• Capacitors

Ex.:	CE	04W	1H	2R2	M	BP
	Type	Shape and performance	Dielectric strength	Capacity	Allowable error	Others

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For charge and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80% −20%	U : UL part
CP : Oil	2A : 100V		C : CSA part
CM : Mica	2B : 125V	P : +100% −0%	W : UL-CSA type
CF : Metallized	2C : 160V		F : Lead wire forming
CH : Metallized	2D : 200V	C : ±0.25pF	
	2E : 250V	D : ±0.5pF	
	2H : 500V	= : Others	
	2J : 630V		

*** Capacity (electrolyte only)**

2 2 2 ⇒ 2200μF
2 — Indicates number of zeros after effective number.
2 2 — 2-digit effective number.

• Units: μF.

2 R 2 ⇒ 2.2μF
2 — 1-digit effective number.
2 R — 2-digit effective number, decimal point indicated by R.

• Units: μF.

*** Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF = 0.0022μF
2 —(More than 2)— Indicates number of zeros after effective number.
2 2 — 2-digit effective number.

• Units: μF.

2 2 1 ⇒ 220pF
1 —(0 or 1)— Indicates number of zeros after effective number.
2 2 — 2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

Version P.W.B. name	U.S.A. & Canada	Europe	Multi-Voltage	U.K.
Main amp	1U-2865	1U-2865A		
Rear amp	1U-2866	1U-2866A		
Input & Surround	1U-2867	1U-2867A		
FLD & Video	1U-2883	1U-2883A		
Tuner & Volume	1U-2889	1U-2889A	1U-2889B	1U-2889A

PARTS LIST OF P. W. BOARD

1U-2865 MAIN AMP P.W.B. UNIT ASS'Y
for U.S.A. and Canada models

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC451	263 0565 007	IC BA15218	
IC551	263 0793 002	IC NJM7806FA(S)	
IC552	268 0073 905	IC ICP-N15	
IC913,914	262 1295 001	IC UPD4094BC	
TR301~304	271 0094 919	Transistor 2SA970(BL)	
TR305,306	271 0131 924	Transistor 2SA988(E/F)	
TR307~312	273 0235 923	Transistor 2SC1841(E/F)	
TR313,314	273 0198 002	Transistor 2SC1815(Y)	
TR315,316	274 0060 900	Transistor 2SD667A(C)	
TR317,318	271 0053 908	Transistor 2SB647A(C)	
TR323,324	273 0235 923	Transistor 2SC1841(E/F)	
TR325	271 0131 924	Transistor 2SA988(E/F)	
TR351,352	271 0131 924	Transistor 2SA988(E/F)	
TR353	273 0303 910	Transistor 2SC1740S(S)	
TR354	271 0192 905	Transistor 2SA933S(S)	
TR355	272 0131 901	Transistor 2SB1041(R)	
TR401	271 0094 919	Transistor 2SA970(BL)	
TR403	271 0094 919	Transistor 2SA970(BL)	
TR405	271 0131 924	Transistor 2SA988(E/F)	
TR407	273 0235 923	Transistor 2SC1841(E/F)	
TR409	273 0235 923	Transistor 2SC1841(E/F)	
TR411	273 0235 923	Transistor 2SC1841(E/F)	
TR413	273 0198 002	Transistor 2SC1815(Y)	
TR415	274 0060 900	Transistor 2SD667A(C)	
TR417	271 0053 908	Transistor 2SB647A(C)	
TR423	273 0235 923	Transistor 2SC1841(E/F)	
TR441	273 0253 918	Transistor 2SC2878(A/B)	
TR442	269 0022 904	Transistor DTA143ES(4.7k-4.7k)	
TR443	269 0018 905	Transistor DTC143ES(4.7k-4.7k)	
TR481~483	273 0303 910	Transistor 2SC1740S(S)	
TR484,485	273 0303 910	Transistor 2SC1740S(S)	
TR487	271 0192 905	Transistor 2SA933S(S)	Built in resistor
TR488	273 0303 910	Transistor 2SC1740S(S)	Built in resistor
TR551	273 0303 910	Transistor 2SC1740S(S)	Built in resistor
TR801	269 0018 905	Transistor DTC143ES(4.7k-4.7k)	Built in resistor
TR802	273 0303 910	Transistor 2SC1740S(S)	Built in resistor
TR803	269 0022 904	Transistor DTA143ES(4.7k-4.7k)	
TR902~904	269 0022 904	Transistor DTA143ES(4.7k-4.7k)	
D301~306	276 0616 907	Diode 1SS252	
D307~310	276 0619 904	Diode 1S2471	
D311,312	276 0616 907	Diode 1SS252	
D351	276 0305 001	Diode S4VB20	

Ref. No.	Part No.	Part Name	Remarks
D352	276 0616 907	Diode 1SS252	
D401	276 0616 907	Diode 1SS252	
D403	276 0616 907	Diode 1SS252	
D405	276 0616 907	Diode 1SS252	
D407	276 0619 904	Diode 1S2471	
D409	276 0619 904	Diode 1S2471	
D411	276 0616 907	Diode 1SS252	
D441	276 0616 907	Diode 1SS252	
D481,482	276 0616 907	Diode 1SS252	
D801	276 0553 905	Diode 1SR35-200A	
D802~804	276 0616 907	Diode 1SS252	
D912	276 0616 907	Diode 1SS252	
ZD351	276 0632 907	Zener diode MTZJ27D	
ZD551	276 0644 911	Zener diode MTZJ7.5A	
ZD801	276 0634 905	Zener diode MTZJ3.3A	
RESISTORS GROUP			
VR301,302	211 6064 048	Semi fixed resistor 5kohm	V06PB502
VR401	211 6064 048	Semi fixed resistor 5kohm	V06PB502
VR451	211 0798 103	Variable resistor 100kohm	V14V20FW104K
VR452	211 0797 117	Variable resistor 30kohm	V14V20FC303K
VR453	211 0797 133	Variable resistor 10kohm	V14V20FC103K
⚠R315~318	241 2380 963	Carbon 2.2kohm 1/4W	RD14B2E222JNBS
⚠R319,320	241 2315 967	Carbon 68ohm 1/4W	RD14B2E680GFRS
⚠R321~324	241 2377 976	Carbon 130ohm 1/4W	RD14B2E131JNBS
⚠R331,332	241 2378 920	Carbon 220ohm 1/4W	RD14B2E221JNBS
⚠R333~340	244 2043 982	Metallic 0.22ohm 1W	RS14B3AR22JNBS(S)
⚠R345,346	244 2051 987	Metallic 4.7ohm 1W	RS14B3A4R7JNBS(S)
⚠R371~374	244 2043 982	Metallic 0.22ohm 1W	RS14B3AR22JNBS(S)
⚠R384	241 2387 940	Carbon 4.7ohm 1/4W	RD14B2E4R7JNBS
⚠R408,409	241 2380 963	Carbon 2.2kohm 1/4W	RD14B2E222JNBS
⚠R410	241 2315 967	Carbon 68ohm 1/4W	RD14B2E680GFRS
⚠R411,412	241 2377 976	Carbon 130ohm 1/4W	RD14B2E131JNBS
⚠R416	241 2378 920	Carbon 220ohm 1/4W	RD14B2E221JNBS
⚠R417~420	244 2043 982	Metallic 0.22ohm 1W	RS14B3AR22JNBS(S)
⚠R423	244 2051 987	Metallic 4.7ohm 1W	RS14B3A4R7JNBS(S)
⚠R481,482	241 2387 908	Carbon 1ohm 1/4W	RD14B2E010JNBS
CAPACITORS GROUP			
C301,302	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C305,306	253 1179 945	Ceramic 220pF/50V	CK45B1H221K
C307,308	255 1264 966	Film 3300pF/50V	CQ93M1H332J(B)
C309,310	253 4536 909	Ceramic 10pF/50V	CC45SL1H100D

Ref. No.	Part No.	Part Name	Remarks
C311,312	254 4256 952	Electrolytic 220µF/25V	CE04W1E221M
C313~316	255 1264 908	Film 1000pF/50V	CQ93M1H102J(B)
C317,318	253 4476 904	Ceramic 18pF/500V	CC45SL2H180J
C319,320	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C321,322	255 1265 936	Film 0.01µF/50V	CQ93M1H103J(B)
C323,324	256 1042 903	Metalizde 0.1µF/250V	CF93A2E104K
C325,326	253 1128 909	Ceramic 220pF/500V	CK45B2H221K
C327	255 1265 936	Film 0.01µF/50V	CQ93M1H103J(B)
C331~334	254 4262 904	Electrolytic 4.7µF/63V	CE04W1J4R7M
C351,352	254 4493 003	Electrolytic 8200µF/50V	CE04W1H822M(DL)
C355	256 1042 903	Metalizde 0.1µF/250V	CF93A2E104K
C356,357	256 1034 979	Metalizde 0.1µF/50V	CF93A1H104J
C358,359	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C360	254 4258 918	Electrolytic 10µF/35V	CE04W1V100M
C401	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C403	253 1179 945	Ceramic 220pF/50V	CK45B1H221K
C404	255 1264 966	Film 3300pF/50V	CQ93M1H332J(B)
C405	253 4536 909	Ceramic 10pF/50V	CC45SL1H100D
C406	254 4256 952	Electrolytic 220µF/25V	CE04W1E221M
C407,408	255 1264 908	Film 1000pF/50V	CQ93M1H102J(B)
C409	253 4476 904	Ceramic 18pF/500V	CC45SL2H180J
C410	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C411	255 1265 936	Film 0.01µF/50V	CQ93M1H103J(B)
C412	256 1042 903	Metalizde 0.1µF/250V	CF93A2E104K
C421,422	254 4262 904	Electrolytic 4.7µF/63V	CE04W1J4R7M
C425	253 1128 909	Ceramic 220pF/500V	CK45B2H221K
C426,427	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C429	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C432	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C451,452	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C455,456	253 1179 903	Ceramic 100pF/50V	CK45B1H101K
C457,458	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C459,460	255 1264 940	Film 2200pF/50V	CQ93M1H222J(B)
C461,462	256 1035 907	Metalizde 0.18µF/50V	CF93A1H184J
C463,464	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C467,468	255 1265 949	Film 0.012µF/50V	CQ93M1H123J(B)
C469,470	256 1034 940	Metalizde 0.056µF/50V	CF93A1H563J
C471,472	254 4260 922	Electrolytic 0.33µF/50V	CE04W1HR33M
C473	253 9031 904	Ceramic 0.047µF/25V	CK45=1E473K
C474	253 1148 905	Ceramic 0.022µF/50V	CK45F1H223Z
C481	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C482	254 4250 945	Electrolytic 330µF/6.3V	CE04W0J331M
C498,499	253 9039 906	Ceramic 0.1µF/25V	CK45=1E104Z
C551	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C552	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C801	254 4250 783	Electrolytic 3300µF/6.3V	CE04W0J332MC
C802,803	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C804	254 4258 905	Electrolytic 4.7µF/35V	CE04W1V4R7M

Ref. No.	Part No.	Part Name	Remarks
C805	256 1034 982	Metalizde 0.12µF/50V	CF93A1H124J
C806	254 4250 932	Electrolytic 220µF/6.3V	CE04W0J221M
C807	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C921	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
OTHERS PARTS GROUP			
	EP- 5667 H2	Terminal	
	451 0309 071	PVC tube (L=10)	TR313,314,413
CN10A	205 0967 007	10P TXC base (P)	
CN11A	205 0275 016	11P EH connector base	
CN13A	205 0974 032	13P TXC base (P)	
CN25A	205 0736 089	25P FFC connector base	
CN4A	205 0233 045	4P EH connector base	
CN4B	205 0969 047	4P TAC-L base	
CN6A,6B,6C	205 0969 063	6P TAC-L base	
CN7A,7B	205 0967 078	7P TXC base (P)	
CN9A	205 0967 094	9P TXC base (P)	
CN9B	205 0343 090	9P connector base (KR-PH)	
J-PR	203 0524 046	1P SIN cord Ass'y	
JK301	204 8509 011	2P pin jack(C-GND)	
K-OR	203 0524 059	1P SIN cord Ass'y	
L301,302	235 0104 007	Inductor(1MH)	
L401	235 0104 007	Inductor(1MH)	
Q-BK	203 0632 080	1P SIN cord Ass'y	
R-BR	203 0632 077	1P SIN cord Ass'y	
RL481	214 0129 001	Relay(DH2TU)	
RL482	214 0187 001	Relay(DH24D2-OS(M)-2)	
SP003	205 0971 006	2P push terminal	
TP301,302	205 0190 036	3P NH connector base	
TP401	205 0190 036	3P NH connector base	

1U-2865A MAIN AMP P.W.B. UNIT ASS'Y for Europe, Asia and U.K. models (Same as 1U-2865 except the followings)

Ref. No.	Part No.	Part Name	Remarks
CAPACITORS GROUP			
C428	255 1264 982	Film 4700pF/50V	Add

1U-2867 INPUT & SURROUND P.W.B. UNIT ASS'Y for U.S.A. and Canada models

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	263 0672 903	IC BA4558F	
IC102	262 1228 007	IC LC7822	
IC103	263 0672 903	IC BA4558F	
IC201	263 0938 003	IC DDSC-A	
IC202	262 1874 008	IC NJU9701G	
IC203	262 1875 900	IC BU4066BCF	
IC205	262 1875 900	IC BU4066BCF	
TR201	269 0055 900	Transistor DTA144EK(47k-47k)	Built in resistor
TR202,203	269 0054 901	Transistor DTC144EK(47k-47k)	Built in resistor
TR205	269 0054 901	Transistor DTC144EK(47k-47k)	Built in resistor
TR206	269 0048 904	Transistor DTC143EK(4.7k-4.7k)	Built in resistor
TR207~209	269 0054 901	Transistor DTC144EK(47k-47k)	Built in resistor
TR210	274 0169 908	Transistor 2SD1292(R)	
D202~205	276 0616 907	Diode 1SS252	
ZD201	276 0637 902	Zener diode MTZJ6.2A	
RESISTORS GROUP			
R101,102	247 0006 946	Chip 390ohm 1/10W	RM73B--391J
R103,104	247 0011 986	Chip 68kohm 1/10W	RM73B--683J
R105,106	247 0012 969	Chip 150kohm 1/10W	RM73B--154J
R107,108	247 0004 922	Chip 47ohm 1/10W	RM73B--470J
R109,110	247 0007 945	Chip 1kohm 1/10W	RM73B--102J
R111,112	247 0014 909	Chip 560kohm 1/10W	RM73B--564J
R113,114	247 0011 944	Chip 47kohm 1/10W	RM73B--473J
R115,116	247 0003 949	Chip 22ohm 1/10W	RM73B--220J
R117,118	247 0005 905	Chip 100ohm 1/10W	RM73B--101J
R119,120	247 0013 984	Chip 470kohm 1/10W	RM73B--474J
R121~128	247 0015 966	Chip 2.7Mohm 1/10W	RM73B--275J
R133~144	247 0006 962	Chip 470ohm 1/10W	RM73B--471J
R145	247 0014 925	Chip 680kohm 1/10W	RM73B--684J
R151,152	247 0006 962	Chip 470ohm 1/10W	RM73B--471J
R153,154	247 0011 986	Chip 68kohm 1/10W	RM73B--683J
R155,156	247 0012 969	Chip 150kohm 1/10W	RM73B--154J
R157~160	247 0005 905	Chip 100ohm 1/10W	RM73B--101J
R201	247 0009 956	Chip 7.5kohm 1/10W	RM73B--752J
R202	247 0011 944	Chip 47kohm 1/10W	RM73B--473J
R203	247 0010 929	Chip 15kohm 1/10W	RM73B--153J
R204	247 0009 956	Chip 7.5kohm 1/10W	RM73B--752J
R205	247 0011 944	Chip 47kohm 1/10W	RM73B--473J
R206	247 0010 929	Chip 15kohm 1/10W	RM73B--153J
R207	247 0016 923	Chip 4.7Mohm 1/10W	RM73B--475K
R208,209	247 0011 960	Chip 56kohm 1/10W	RM73B--563J
R210	247 0012 927	Chip 100kohm 1/10W	RM73B--104J
R211	247 0019 988	Chip 100kohm 1/10W	RM73B--104F
R212	247 0010 929	Chip 15kohm 1/10W	RM73B--153J
R213	247 0009 969	Chip 8.2kohm 1/10W	RM73B--822J
R214	247 0010 929	Chip 15kohm 1/10W	RM73B--153J
R215	247 0013 942	Chip 330kohm 1/10W	RM73B--334J
R218~220	247 0011 944	Chip 47kohm 1/10W	RM73B--473J
R221~223	247 0009 969	Chip 8.2kohm 1/10W	RM73B--822J
R224	247 0014 967	Chip 1Mohm 1/10W	RM73B--105J
R225	247 0010 929	Chip 15kohm 1/10W	RM73B--153J
R226	247 0010 945	Chip 18kohm 1/10W	RM73B--183J
R227	247 0010 929	Chip 15kohm 1/10W	RM73B--153J
R228,229	247 0003 936	Chip 20ohm 1/10W	RM73B--200J
R230	247 0009 956	Chip 7.5kohm 1/10W	RM73B--752J
R231	247 0009 927	Chip 5.6kohm 1/10W	RM73B--562J
R232	247 0010 945	Chip 18kohm 1/10W	RM73B--183J
R233~235	247 0011 944	Chip 47kohm 1/10W	RM73B--473J
⚠R236	241 2387 940	Carbon 4.7ohm 1/4W	RD14B2E4R7JNBS
R237	247 0007 945	Chip 1kohm 1/10W	RM73B--102J
R239,240	247 0005 905	Chip 100ohm 1/10W	RM73B--101J
R241,242	247 0006 962	Chip 470ohm 1/10W	RM73B--471J
R251,252	247 0008 928	Chip 2.2kohm 1/10W	RM73B--222J
R253,254	247 0009 901	Chip 4.7kohm 1/10W	RM73B--472J
CAPACITORS GROUP			
C101,102	257 0005 944	Ceramic 220pF/50V	CC73SL1H221J
C103,104	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C107,108	254 4254 925	Electrolytic 33µF/16V	CE04W1C330M
C109,110	255 1264 995	Film 5600pF/50V	CQ93M1H562J(B)
C111,112	257 0009 908	Ceramic 1500PF/50V	CK73B1H152K
C113,114	257 0012 966	Ceramic 0.01µF/50V	CK73F1H103Z
C115,116	254 4260 951	Electrolytic 2.2µF/50V	CE04W1H2R2M
C129~131	253 9039 906	Ceramic 0.1µF/25V	CK45=1E104Z
C133	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C136~138	257 0012 982	Ceramic 0.022µF/50V	CK73F1H223Z
C139	257 0009 924	Ceramic 2200PF/50V	CK73B1H222K
C151,152	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C153 ,154	257 0004 961	Ceramic 100pF/50V	CC73SL1H101J
C155,156	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C201,202	256 1034 979	Metalizde 0.1µF/50V	CF93A1H104J
C203	257 0006 969	Ceramic 680pF/50V	CC73SL1H681J
C204	256 1034 937	Metalizde 0.047µF/50V	CF93A1H473J
C205,206	256 1034 979	Metalizde 0.1µF/50V	CF93A1H104J
C207	257 0006 969	Ceramic 680pF/50V	CC73SL1H681J
C208	256 1034 937	Metalizde 0.047µF/50V	CF93A1H473J
C209	254 4254 912	Electrolytic 22µF/16V	CE04W1C220M
C210,211	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C212	254 4252 930	Electrolytic 100µF/10V	CE04W1A101M
C213	255 1264 982	Film 4700pF/50V	CQ93M1H472J(B)
C214	254 4254 912	Electrolytic 22µF/16V	CE04W1C220M
C215	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M

Ref. No.	Part No.	Part Name	Remarks
C216	256 1035 910	Metalizde 0.22µF/50V	CF93A1H224J
C217,218	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C219	254 4254 941	Electrolytic 100µF/16V	CE04W1C101M
C220	255 1264 995	Film 5600pF/50V	CQ93M1H562J(B)
C221	254 4250 958	Electrolytic 470µF/6.3V	CE04W0J471M
C222	256 1034 937	Metalizde 0.047µF/50V	CF93A1H473J
C223	257 0006 927	Ceramic 470pF/50V	CC73SL1H471J
C224	257 0009 924	Ceramic 2200PF/50V	CK73B1H222K
C225	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C226	256 1035 978	Metalizde 0.68µF/50V	CF93A1H684J
C227~229	256 1035 910	Metalizde 0.22µF/50V	CF93A1H224J
C230,231	254 4260 977	Electrolytic 4.7µF/50V	CE04W1H4R7M
C232	256 1035 910	Metalizde 0.22µF/50V	CF93A1H224J
C233~236	256 1034 979	Metalizde 0.1µF/50V	CF93A1H104J
C237,238	255 1265 978	Film 0.022µF/50V	CQ93M1H223J(B)
C239~241	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C242	257 0014 935	Ceramic 0.1µF/50V	CK73F1H104Z
C243,244	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C245	257 0006 927	Ceramic 470pF/50V	CC73SL1H471J
C246	257 0009 940	Ceramic 3300PF/50V	CK73B1H332K
C247	257 0014 935	Ceramic 0.1µF/50V	CK73F1H104Z
C248,249	257 0013 907	Ceramic 0.047µF/50V	CK73F1H473Z
C250	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C251	257 0014 935	Ceramic 0.1µF/50V	CK73F1H104Z
C252	257 0006 927	Ceramic 470pF/50V	CC73SL1H471J
C253,254	257 0009 979	Ceramic 5600PF/50V	CK73B1H562K
C255	257 0014 935	Ceramic 0.1µF/50V	CK73F1H104Z
C256	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C257	254 4252 930	Electrolytic 100µF/10V	CE04W1A101M
C259,260	257 0005 944	Ceramic 220pF/50V	CC73SL1H221J
C321,322	255 1265 936	Film 0.01µF/50V	CQ93M1H103J(B)
C403	253 1179 945	Ceramic 220pF/50V	CK45B1H221K
C404	255 1264 966	Film 3300pF/50V	CQ93M1H332J(B)
C412	256 1042 903	Metalizde 0.1µF/250V	CF93A2E104K
C432	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C806	254 4250 932	Electrolytic 220µF/6.3V	CE04W0J221M
OTHERS PARTS GROUP			
CN10A	205 0966 008	10P TXC socket(X)	
CN13A	205 0968 035	13P TXC socket(X)	
CN6B	205 0970 065	6P TAC-L socket	
JK101~103	204 8497 000	4P pin jack (GND)(K)	
JK104	204 8509 008	2P pin jack (C-GND)	
L201	235 0060 989	Inductor (121)	
XT201	399 0223 907	Crystal (CSA2.00MG-TF01)	

1U-2867A INPUT & SURROUND P.W.B. UNIT ASS'Y for Europe, Asia and U.K. models (Same as 1U-2867 except the following)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	263 0896 909	IC NJM2068MD	Add
IC103	263 0672 903	IC BA4558F	Change
RESISTORS GROUP			
R726	241 2396 999	Carbon 200ohm 1/4W	Change
R733	241 2396 999	Carbon 200ohm 1/4W	Change
J101,102	241 2400 911	Carbon 4.7kohm 1/4W	Add
CAPACITORS GROUP			
C121~128	257 0004 903	Ceramic 56pF/50V	Add
C147,148	257 0004 961	Ceramic 100pF/50V	Add
C281,282	255 1264 908	Film 0.001µF/50V	Add
OTHERS PARTS GROUP			
LF101,102	235 9003 002	FTZ choke coil	Add

1U-2889 TUNER & VOLUME P.W.B. UNIT ASS'Y for U.S.A and Canada models

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC001	263 0891 001	IC LA1265(S)	
IC002	263 0439 007	IC LA3401	
IC003	262 0719 009	IC LM7001	
IC004	261 0102 008	IC Front end	
IC261	263 0322 004	IC BA4558	
IC262	262 0625 009	IC TC9176P	
IC263	263 0322 004	IC BA4558	
IC264	263 0927 001	IC BA6208S	
TR002	273 0434 902	Transistor 2SC2058(Q)	
TR003,004	269 0046 906	Transistor DTA114ES(10k-10k)	Built in resistor
TR005	273 0435 901	Transistor 2SC1740SLN(E)	
TR006	275 0053 907	Transistor 2SK365(BL/GR)	
TR007,008	269 0072 909	Transistor DTC323TS(2.2k)	Built in resistor
TR009	269 0079 902	Transistor DTC144TS(47k)	Built in resistor
TR010	269 0080 904	Transistor DTA114TS(10k)	Built in resistor
D001~003	276 0616 907	Diode 1SS252	
D006	276 0553 905	Diode 1SR35-200A	
D261	276 0616 907	Diode 1SS252	

Ref. No.	Part No.	Part Name	Remarks
RESISTORS GROUP (Not included carbon film ±5% 1/4W)			
VR261	211 0858 001	Variable resistor 100kohm	V1640V30F=104R(MG)
CAPACITORS GROUP			
C004	253 4536 925	Ceramic 12pF/50V	CC45SL1H120J
C007,008	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C011	254 3056 917	Electrolytic 1µF/50V	CE04D1H010MBP
C013	254 4260 906	Electrolytic 0.1µF/50V	CE04W1H0R1M
C014	253 1181 917	Ceramic 0.022µF/50V	CK45F1H223Z
C016	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C017,018	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C019	254 4260 935	Electrolytic 0.47µF/50V	CE04W1HR47M
C020	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C021	254 4260 980	Electrolytic 10µF/50V	CE04W1H100M
C022	253 1181 917	Ceramic 0.022µF/50V	CK45F1H223Z
C023	253 4538 949	Ceramic 100pF/50V	CC45SL1H101J
C024	256 1034 940	Metalizde 0.056µF/50V	CF93A1H563J
C025	254 4254 912	Electrolytic 22µF/16V	CE04W1C220M
C027	254 4254 912	Electrolytic 22µF/16V	CE04W1C220M
C028	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C029	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C033,034	253 4536 954	Ceramic 16pF/50V	CC45SL1H160J
C035	256 1034 937	Metalizde 0.047µF/50V	CF93A1H473J
C036,037	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C039	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C040	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C041	254 4254 938	Electrolytic 47µF/16V	CE04W1C470M
C042	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C043	254 4260 919	Electrolytic 0.22µF/50V	CE04W1HR22M
C044	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C045	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C046,047	254 4260 951	Electrolytic 2.2µF/50V	CE04W1H2R2M
C048	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C049	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C051	254 4260 951	Electrolytic 2.2µF/50V	CE04W1H2R2M
C052	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C053,054	253 4457 907	Ceramic 750pF/50V	CC45SL1H751J
C056,057	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C059,060	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C060	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C065	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C261~264	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C265	253 1179 987	Ceramic 470pF/50V	CK45B1H471K
C266	253 1179 961	Ceramic 330pF/50V	CK45B1H331K
C267,268	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C269,270	253 1181 917	Ceramic 0.022µF/50V	CK45F1H223Z
C271,272	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C273	253 1179 945	Ceramic 220pF/50V	CK45B1H221K
C274,275	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
C276	254 3056 917	Electrolytic 1µF/50V	CE04D1H010MBP
C277	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C278	254 4260 948	Electrolytic 1µF/50V	CE04W1H010M
C279	253 1181 904	Ceramic 0.01µF/50V	CK45F1H103Z
C297,298	254 4254 909	Electrolytic 10µF/16V	CE04W1C100M
OTHERS PARTS GROUP			
	205 0973 004	3P ANT.terminal	
BL001	231 2096 001	MW ANT-OSC coil	
CF001	261 0145 007	Ceramic filter	FMCFSK107M1-A
CF002	261 0146 006	Ceramic filter	FMCFSK107M2-A
CF003	261 0031 001	Ceramic filter	BFU450C4
CF004	261 0079 005	Ceramic filter	CBS456F11
CF005	261 0116 007	Ceramic filter	SFU450B3
CN6A,6C	205 0970 065	6P TAC-L socket	
CN7A,7B	205 0966 079	7P TXC socket(X)	
CN9A	205 0966 095	9P TXC socket(X)	
T003	231 1145 005	AM IFT	
T004	231 2099 008	FM DET Trans	
XT001	399 0075 003	Crystal (7.2MHZ)	

1U-2889A TUNER & VOLUME P.W.B. UNIT ASS'Y for Europe and U.K. models (Same as 1U-2889 except the following)

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC004	261 0079 005	IC FM front end (U)	Change
TR001	275 0051 909	Transistor 2SK161(GR)	Add
RESISTORS GROUP			
R002	241 2400 937	Carbon 5.6kohm 1/4W	Change
R004	241 2400 995	Carbon 10kohm 1/4W	Add
R005	241 2397 969	Carbon 390ohm 1/4W	Change
R006	241 2397 943	Carbon 330ohm 1/4W	Change
R008	241 2397 943	Carbon 330ohm 1/4W	Change
R011	241 2397 943	Carbon 330ohm 1/4W	Change
R014	241 2396 928	Carbon 100ohm 1/4W	Change
R023	241 2399 909	Carbon 1.6kohm 1/4W	Add
R024	241 2400 953	Carbon 6.8kohm 1/4W	Change
R032	241 2403 976	Carbon 150kohm 1/4W	Add
R033,034	241 2404 904	Carbon 200kohm 1/4W	Change
R035	241 2403 976	Carbon 150kohm 1/4W	Add
R037,038	241 2403 934	Carbon 100kohm 1/4W	Change
R041,042	241 2399 970	Carbon 3.3kohm 1/4W	Change
R048	241 2400 937	Carbon 5.6kohm 1/4W	Change

Ref. No.	Part No.	Part Name	Remarks
R267,268	241 2399 970	Carbon 3.3kohm 1/4W	Change
R274	241 2400 937	Carbon 5.6kohm 1/4W	Change
R275	241 2396 928	Carbon 100ohm 1/4W	Change
R281	241 2400 937	Carbon 5.6kohm 1/4W	Change
R282	241 2396 928	Carbon 100ohm 1/4W	Change
CAPACITORS GROUP			
C006,007	253 1181 904	Ceramic 0.01μF/50V	Change
C016	253 4538 949	Ceramic 100PF/50V	Change
C025~027	254 4254 912	Electrolytic 22μF/16V	Change
C053,054	253 4448 903	Ceramic 330PF/50V	Change
OTHERS PARTS GROUP			
CF001	261 0146 006	FMCFSK107M2-A	Change
LF001	232 9010 009	Anti birdie filter	Add
LF002,003	232 0085 004	:LPF	Add

1U-2889B TUNER & VOLUME P.W.B. UNIT ASS'Y for Asia model (Same as 1U-2889 except the followings)

Ref. No.	Part No.	Part Name	Remarks
RESISTORS GROUP			
R022	241 2402 935	Carbon 39kohm 1/4W	Change
CAPACITORS GROUP			
C266	253 1180 934	Ceramic 1200PF/50V	Change

1U-2883A FLD & VIDEO P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC601	262 1873 009	IC BU4066BC	
IC701	262 2190 011	IC TMP87CM71F-6314	
IC702	499 0150 008	IC SBX1610-52	
TR601,602	273 0198 918	Transistor 2SC1815(BL)	
TR603,604	271 0102 924	Transistor 2SC1015(GR)	
TR701,702	269 0020 906	Transistor DTC114ES(10k-10k)	Built in resistor
D616	276 0616 907	Diode 1SS252	
D617	276 0616 907	Diode 1SS252	
D701	276 0636 903	Diode MTZJ8.2B	
D701,702	276 0616 907	Diode 1SS252	
LD701,702	393 9434 906	LED SEL1210S	
RESISTORS GROUP			
⚠R610	241 2375 907	Carbon 10ohm 1/4W	RD14B2E100JNBS
CAPACITORS GROUP			
C601,602	254 4252 927	Electrolytic 47μF/10V	CE04W1A470M
C604	254 4254 776	Electrolytic 470μF/16V	CE04W1C471M
C605,606	253 4535 955	Ceramic 5pF/50V	CC45SL1H050C
C607,608	254 4252 778	Electrolytic 1000μF/10V	CE04W1A102MC
C703	254 4260 977	Electrolytic 4.7μF/50V	CE04W1H4R7M
C705	254 4250 929	Electrolytic 100μF/6.3V	CE04W0J101M
C706	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
OTHERS PARTS GROUP			
CN25A	205 0736 089	25P FFC connector base	
CN2A	205 0075 025	2P terminal	
CN3B	203 5080 019	3P SCN-SCN connector cord	
CN4B	205 0970 049	4P TAC-L socket	
CN9B	204 2751 001	9P PH-SAN connector cord	
FL701	393 4155 002	FLD (FIP14AM7R)	
JK601,602	204 8468 000	2P pin jack	
SW701~704	212 4789 001	Tact switch	
SW708~713	212 4789 001	Tact switch	
SW719~730	212 4789 001	Tact switch	
XT701	399 0261 901	Crystal (CO.DCRHTP4.00M)	

1U-2866 REAR AMP P.W.B. UNIT ASS'Y for U.S.A. and Canada models

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC501,502	263 0985 001	IC SI-18751	
IC503	263 0801 004	IC NJM7812FA(S)	
IC504	263 0641 002	IC NJM7912FA	
IC505,506	268 0074 904	IC ICP-N20	
TR531	273 0303 910	Transistor 2SC1740S(S)	
TR552	273 0303 910	Transistor 2SC1740S(S)	
D501	276 0616 907	Diode 1SS252	
D502	276 0305 001	Diode S4VB20	
D551	276 0616 907	Diode 1SS252	
D552~557	276 0553 905	Diode 1SR35-200A	
TH531	279 0034 067	Thermistor	PTH9M04BB222TS2F333
RESISTORS GROUP			
⚠R361~364	244 2052 960	Metallic 220ohm 1W	RS14B3A221JNBS(S)
⚠R509,510	244 2051 987	Metallic 4.7ohm 1W	RS14B3A4R7JNBS(S)
⚠R513	241 2387 908	Carbon 1ohm 1/4W	RD14B2E010JNBS
⚠R556	241 2375 978	Carbon 20ohm 1/4W	RD14B2E200JNBS
⚠R557	242 0073 000	Metallic 2.2Mohm 1/2W	RC05GF2H225K
CAPACITORS GROUP			
C399	253 9039 906	Ceramic 0.1μF/25V	CK45=1E104Z
C501,502	253 1179 903	Ceramic 100pF/50V	CK45B1H101K
C503,504	254 4260 951	Electrolytic 2.2μF/50V	CE04W1H2R2M
C505,506	254 4254 938	Electrolytic 47μF/16V	CE04W1C470M
C507,508	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C511,512	256 1034 979	Metalizde 0.1μF/50V	CF93A1H104J
C517,518	254 4257 702	Electrolytic 3300μF/25V	CE04W1E332MC
C519,520	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C521,522	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M
C524	256 1042 903	Metalizde 0.1μF/250V	CF93A2E104K
C526	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C554	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C555	254 4256 790	Electrolytic 2200μF/25V	CE04W1E222MC
C556,557	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
C558	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
⚠C559	253 8014 702	Ceramic 0.01μF/400V AC	CK45F2GAC103MC
C561	254 4254 938	Electrolytic 47μF/16V	CE04W1C470M
C565,566	253 1181 904	Ceramic 0.01μF/50V	CK45F1H103Z
OTHERS PARTS GROUP			
⚠	203 3941 008	AC outlet (2P)	
	203 0632 035	1P SIN cord Ass'y	
	203 0632 048	1P SIN cord Ass'y	
	415 0309 039	PVC tube	TH531
	203 0632 064	1P SIN cord Ass'y	
	203 0633 021	1P contact Ass'y	
	202 0040 909	Fuse clip	
	EP- 5667 H2	Terminal	
	203 0524 062	1P SIN cord Ass'y	
	204 8503 004	:Headphone jack	
	203 0524 075	1P SIN cord Ass'y	
	415 0496 036	UL tube (12.7) BK	
⚠	233 6073 000	Power trans	
	203 0633 018	1P contact Ass'y	
	203 0524 033	1P SIN cord Ass'y	
	203 0632 051	1P SIN cord Ass'y	
	203 0640 014	1P SIN cord Ass'y	
	205 0952 009	4P SP terminal	
	203 0640 001	1P SIN cord Ass'y	
CN11A	204 6552 002	11P EH-SCN connector cord	
CN4B	203 6475 018	4P EH-SCN connector cord	
⚠F001	206 1046 014	Fuse 8A	
⚠F002	206 1046 001	Fuse 6.3A UL 20MM	
⚠F011,012	206 1046 027	Fuse 5A	
L501,502	235 0104 007	Inductor(1MH)	
RL501	214 0187 001	Relay(DH24D2-OS(M)-2)	
RL551	214 0188 000	Relay(VS-12MBNR-SM2) (TV-8)	
SP005	205 0972 005	4P push terminal	
SW001	212 4778 009	2P push switch	

1U-2866A REAR AMP P.W.B. UNIT ASS'Y for Europe, Asia and U.K. models (Same as 1U-2866 except the followings)

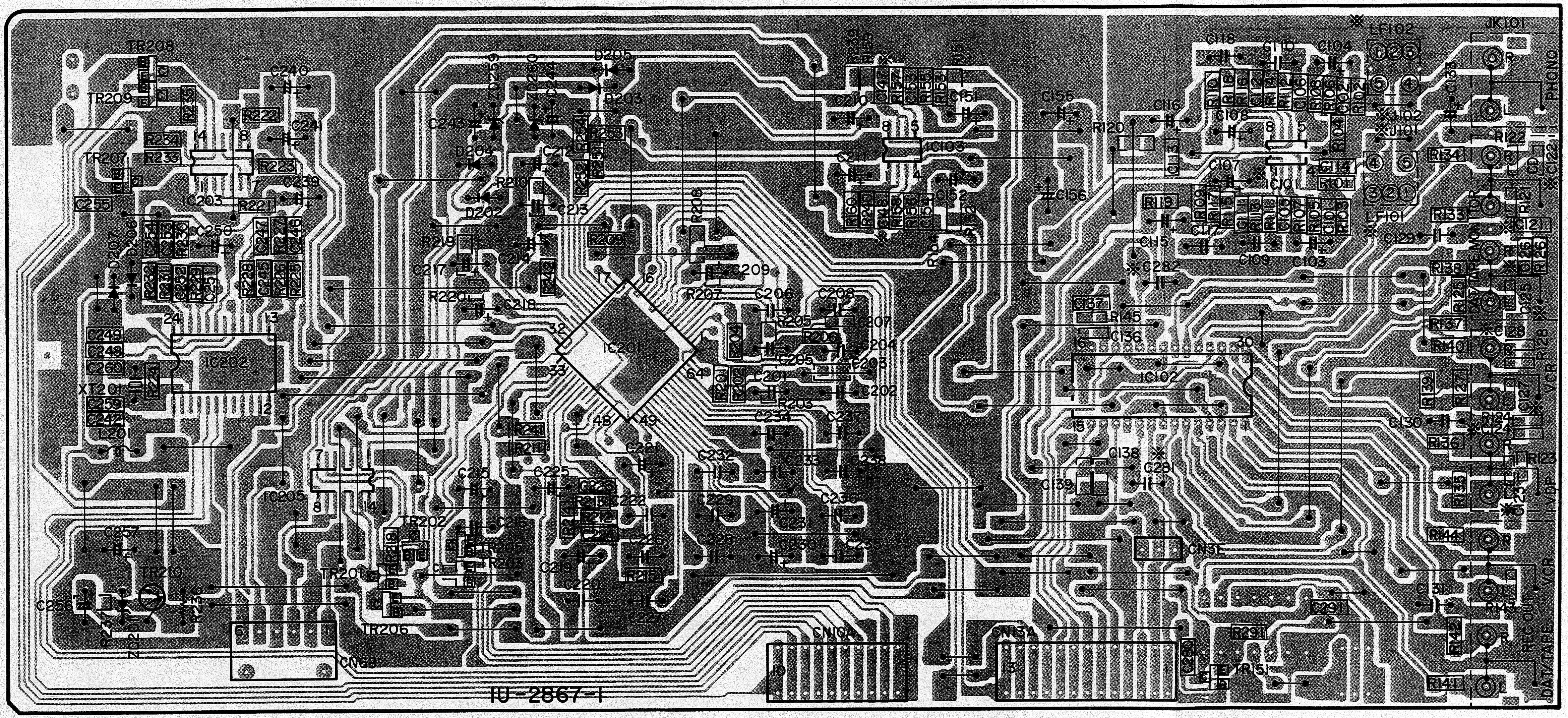
Ref. No.	Part No.	Part Name	Remarks
RESISTORS GROUP			
⚠R557	242 0073 000	Metallic 2.2Mohm 1/2W	Delete
CAPACITORS GROUP			
C361~364	255 1264 982	Film 4700pF/50V	Add
C513,514	255 1264 982	Film 4700pF/50V	Add
OTHERS PARTS GROUP			
⚠	203 3941 008	AC outlet (2P)	Delete
⚠	233 6178 002	Power trans	Change

PRINTED WIRING BOARD

INPUT AND SURROUND P. W. B. ASS'Y
1U-2867 for U. S. A. and Canada
1U-2867A for Europe, Asia and U. K. models

	1U-2867	1U-2867A
⁕	U.S.A.and Canada	Europe,U.K.and Asia
IC101	×	○
J101	×	○
J102	×	○
C121	×	○
C122	×	○
C123	×	○
C124	×	○
C125	×	○
C126	×	○
C127	×	○
C128	×	○
C147	×	○
C148	×	○
C281	×	○
C282	×	○
LF101	×	○
LF102	×	○

Note: ○ : Used × : Not used


1
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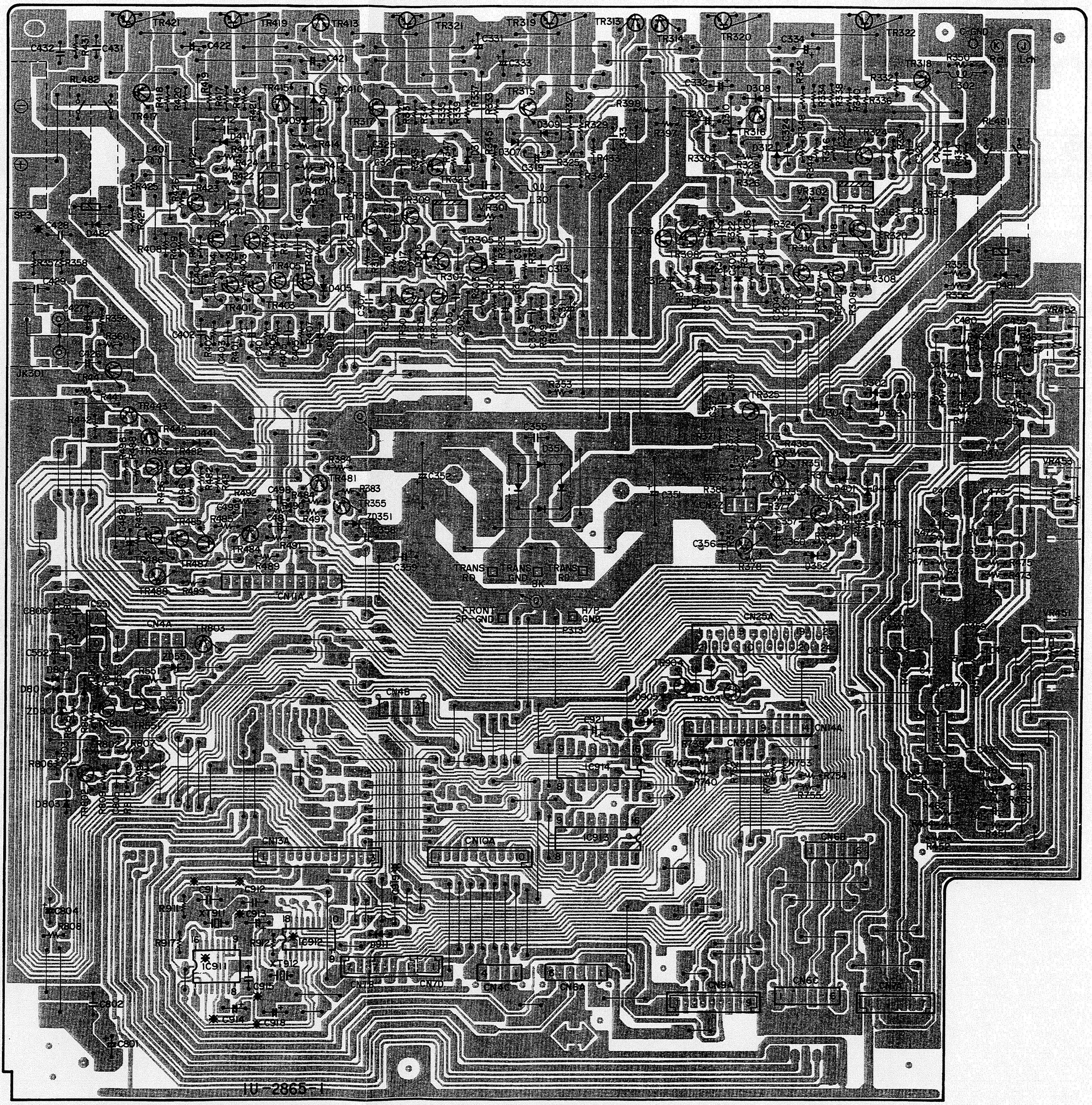
7
8
A
B
C
D
E
1U-2867-1
IC101
IC102
IC103
IC201
IC202
IC203
IC205
TR201
TR202
TR206
TR207
TR208
TR209
TR210
TR151
XT201
L201
LF101
LF102
J101
J102
JK101
PHONO
CN10A
CN13A
CN3E
CN6B
DAT/TAPE
REC OUT
VCR
VDP
CD
TUNER

MAIN AMP. P. W. B. UNIT ASS'Y
1U-2865 for U. S. A. and Canada
1U-2865A for Europe, U. K. and Asia

	1U-2865	1U-2865A
⁕	U.S.A.and Canada	Europe,U.K.and Asia
IC911	×	×
IC912	×	×
D901	×	×
R035	×	×
C428	×	○
C911	×	×
C912	×	×
C913	×	×
C914	×	×
C915	×	×
C918	×	×
C919	×	×

Note: ○ : Used × : Not used


1
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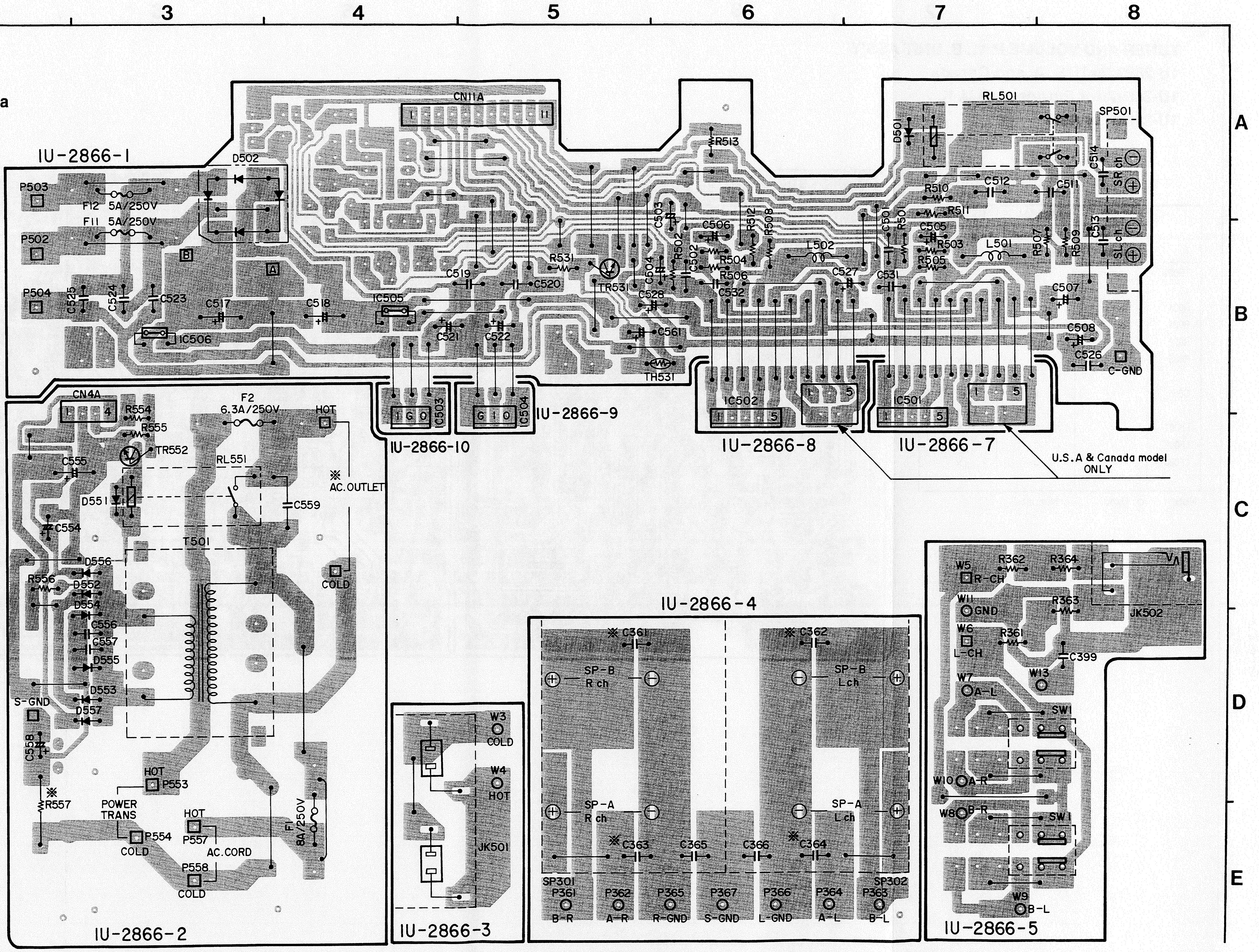
4
5
6
7
8
A
B
C
D
E
1U-2865-1
IC911
IC912
CN13A
CN10A
CN25A
TRANS
FRONT SP GND
H/P GND

REAR AMP. P. W. B. UNIT ASS'Y
1U-2866 for U. S. A. and Canada
1U-2866A for Europe, U. K. and Asia

	1U-2866	1U-2866A
※	U.S.A.and Canada	Europe,U.K.and Asia
R557	○	×
C361	×	○
C362	×	○
C363	×	○
C364	×	○
AC outlet	○	×

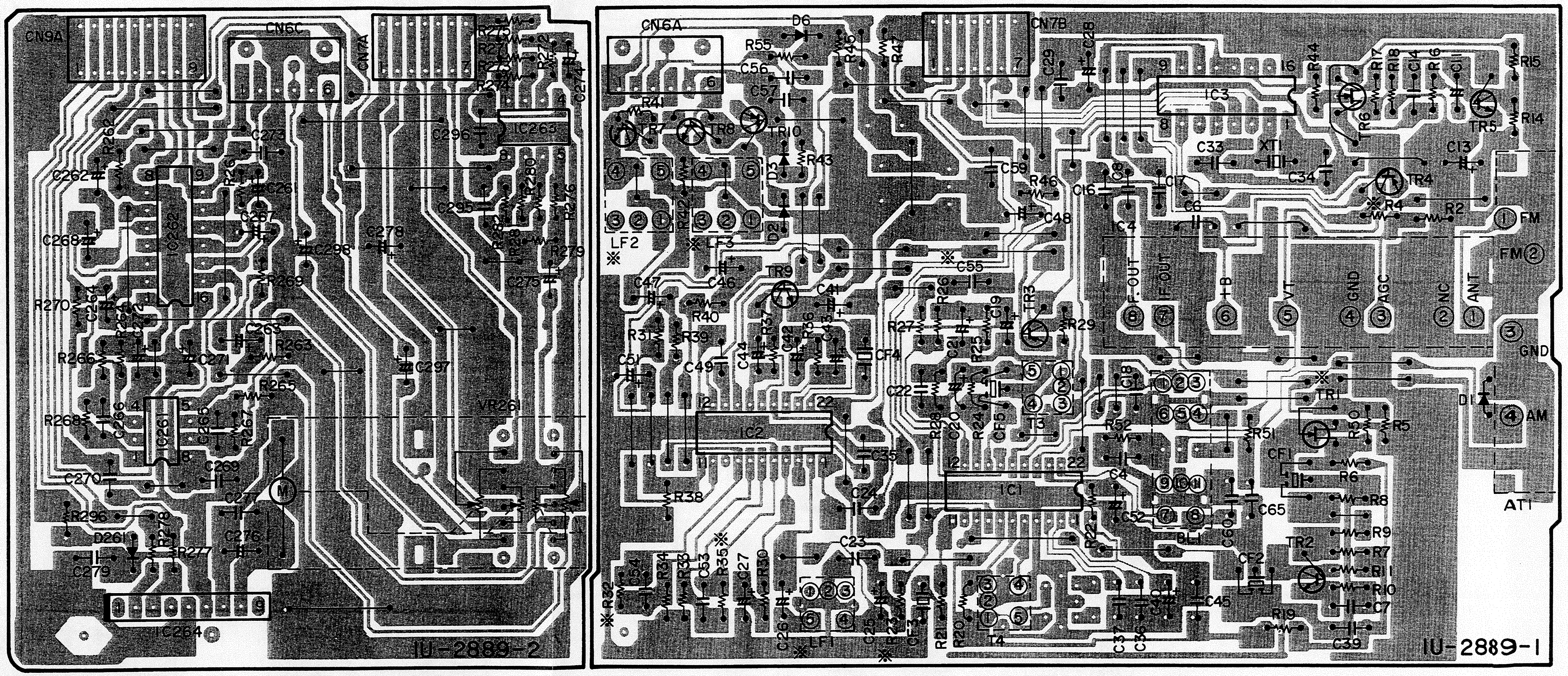
Note: ○ : Used × : Not used


1
2
3
4
5
6
7
8
A
B
C
D
E
IU-2866-1
CN11A
P503
P502
P504
F12 5A/250V
F11 5A/250V
D502
C525
C524
C523
C517
C518
IC505
IC506
C519
C520
C521
C522
R531
TR531
C503
C504
C502
R502
C506
R504
R506
C532
C528
C561
TH531
R512
R508
R513
L502
C527
C501
R501
C531
C505
R503
R505
R510
R511
L501
R507
R509
C512
C511
C513
C514
D501
RL501
SP501
SR ch
SL ch
C507
C508
C526
C-GND
IC502
IC501
IU-2866-8
IU-2866-7
IU-2866-9
IU-2866-10
U.S.A & Canada model ONLY
IU-2866-2
CN4A
R554
R555
TR552
C555
RL551
F2 6.3A/250V
HOT
※ AC.OUTLET
C559
D551
C554
T501
COLD
D556
R556
D552
D554
C556
C557
D555
D553
D557
S-GND
C558
※R557
HOT
P553
POWER TRANS
P554
COLD
P557
AC.CORD
P558
COLD
F1 8A/250V
IU-2866-3
W3 COLD
W4 HOT
JK501
IU-2866-4
※C361
※C362
SP-B R ch
SP-B L ch
SP-A R ch
SP-A L ch
※C363
C365
C366
※C364
SP301
SP302
P361 B-R
P362 A-R
P365 R-GND
P367 S-GND
P366 L-GND
P364 A-L
P363 B-L
IU-2866-5
W5 R-CH
R362
R364
W11 GND
R363
JK502
W6 L-CH
R361
C399
W7 A-L
W13
SW1
W10 A-R
W8 B-R
W9 B-L

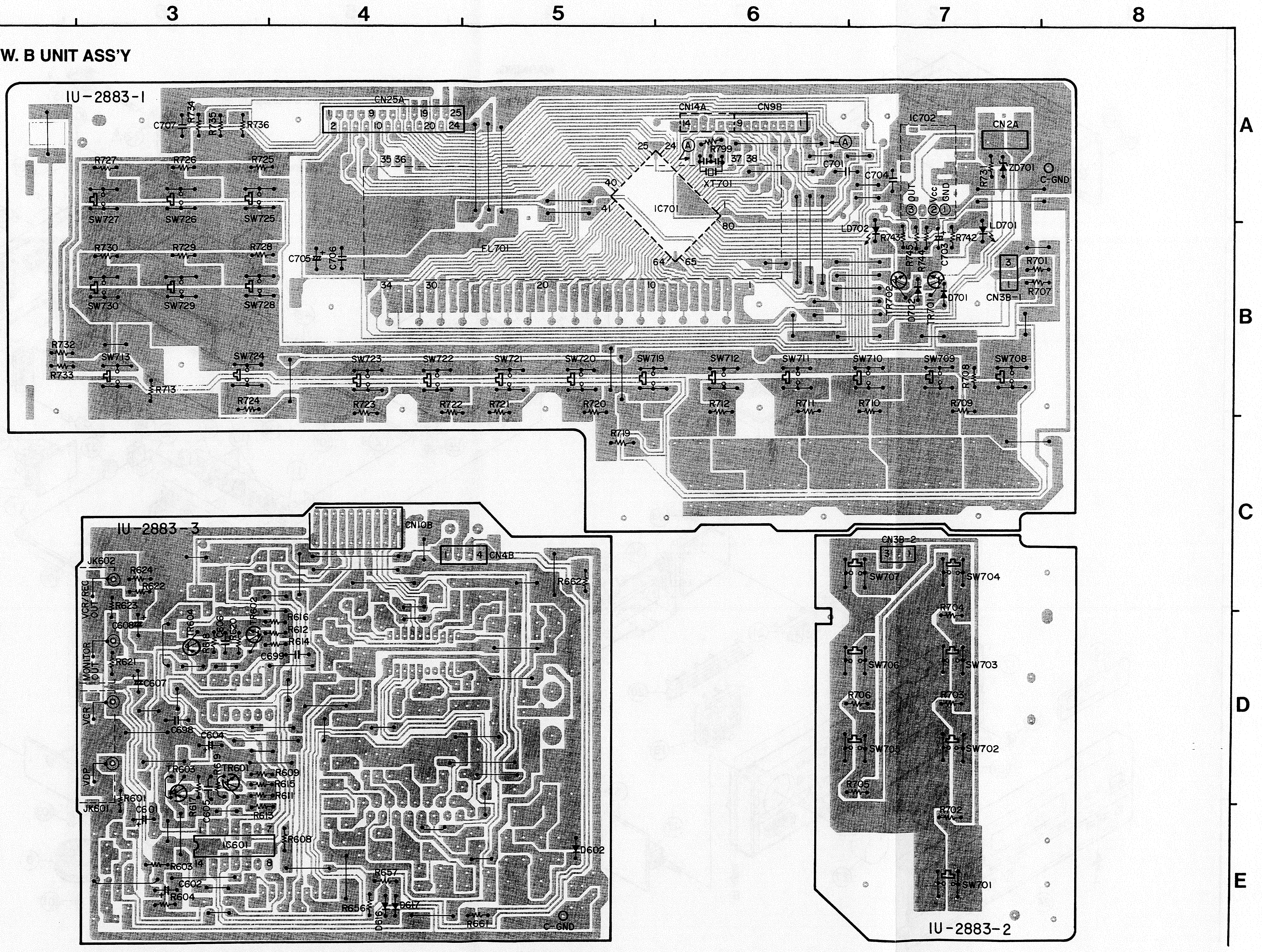
TUNER AND VOLUME P. W. B. UNIT ASS'Y
1U-2889 for U. S. A. and Canada
1U-2889A for Europe, and U. K.
1U-2889B for Asia

	1U-2889	1U-2889A	1U-2889B
✻	U.S.A. and Canada	Europe and U.K.	Asia
TR001	×	○	×
R004	×	○	×
R023	×	○	×
R032	×	○	×
R035	×	○	×
C055	×	×	×
LF001	×	○	×
LF002	×	○	×
LF003	×	○	×

Note: ○ : Used × : Not used


CN9A
CN6C
CN7A
CN6A
D6
CN7B
IC3
IC265
IC262
IC261
IC2
IC1
IC4
VR261
LF1
LF2
LF3
TR1
TR2
TR3
TR4
TR5
TR6
TR8
TR9
TR10
XT1
CF1
CF2
CF4
D1
D261
FM
GND
AM
ANT
AT1
IF OUT
+B
VT
AGC
NC
1U-2889-2
1U-2889-1

1U-2883 FLD AND VIDEO P. W. B UNIT ASS'Y


1
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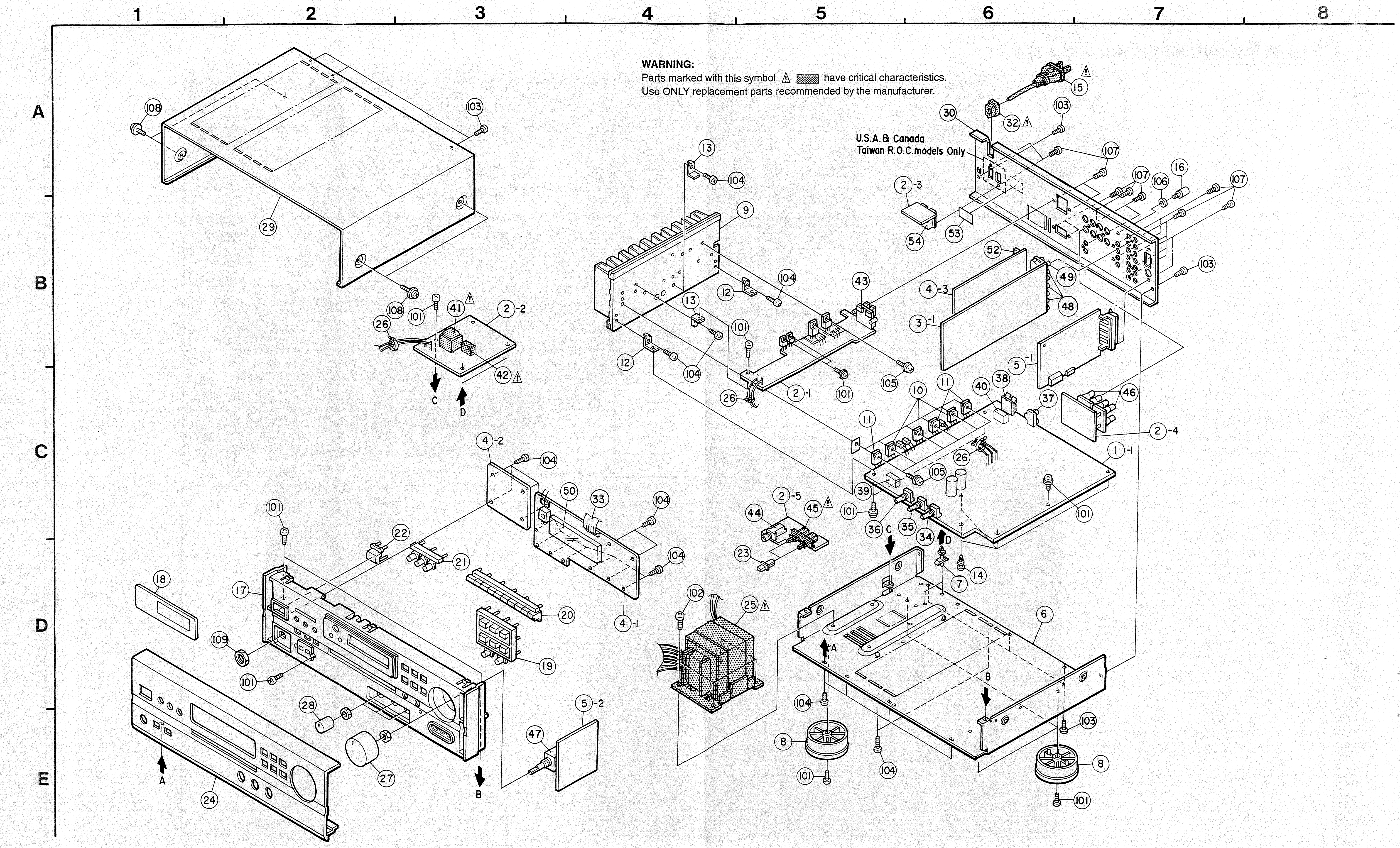
3
4
5
6
7
8
A
B
C
D
E
IU-2883-1
CN25A
CN14A
CN9B
CN2A
IC702
IC701
FL701
XT701
C-GND
ZD701
LD701
LD702
TR701
TR702
D701
CN3B-1
R701
R707
SW727
SW726
SW725
SW730
SW729
SW728
SW713
SW724
SW723
SW722
SW721
SW720
SW719
SW712
SW711
SW710
SW709
SW708
IU-2883-3
CN10B
CN4B
JK602
JK601
VCR/REC OUT
MONITOR OUT
VCR
VDP
TR601
TR602
TR603
TR604
IC601
D602
D616
C-GND
CN3B-2
SW707
SW704
SW706
SW703
SW705
SW702
SW701
IU-2883-2

EXPLODED VIEW


1
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A
B
C
D
E
108
103
29
108
26
101
41
2-2
42
C
D
13
104
9
12
104
13
12
104
101
26
2-1
101
105
105
43
30
32
15
103
107
U.S.A.& Canada
Taiwan R.O.C.models Only
107
16
106
107
2-3
54
53
52
4-3
49
48
3-1
103
5-1
40
38
37
46
10
11
11
2-4
1-1
26
105
39
101
101
36
C
35
34
D
2-5
44
45
23
14
7
6
4-2
104
50
33
104
104
4-1
101
22
21
20
19
18
17
109
101
28
27
24
A
B
5-2
47
102
25
104
A
B
8
101
104
103
8
101

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

PARTS LIST OF EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Q'ty
◉ 1	Note	Main amp. P.W.B. unit Ass'y		1
1-1	—	Main amp. P.W.B. unit		
◉ 2	Note	Rear amp. P.W.B. unit Ass'y		1
2-1	—	Rear amp. P.W.B. unit		
2-2	—	Power supply P.W.B. unit		
2-3	—	AC outlets P.W.B. unit		
2-4	—	Front SP. P.W.B. unit		
2-5	—	H/P and SW. P.W.B. unit		
◉ 3	Note	Input and surround P.W.B. unit Ass'y		1
3-1	—	Input and surround P.W.B. unit		
◉ 4	Note	FLD and video P.W.B. unit Ass'y		1
4-1	—	FLD P.W.B. unit		
4-2	—	Tact S.W P.W.B. unit		
4-3	—	Video P.W.B. unit		
◉ 5	Note	Tuner and Volume P.W.B. unit Ass'y		1
5-1	—	Tuner P.W.B. unit		
5-2	—	Volume P.W.B. unit		
◉ 6	411 1334 108	Main chassis		1
◉ 7	443 0518 016	P.W.B. holder		2
8	104 0282 007	*Foot Ass'y		4
9	417 0513 009	*Power radiator		1
10	273 0443 003	2SC4278(E/F)		3
11	271 0283 005	2SA1633(E/F)		3
◉ 12	412 4000 005	*P.W.B.bracket(A)		2
◉ 13	412 3766 007	*L bracket		2
14	412 2814 002	Card spacer (L=8)		4
⚠ 15	Note	AC cordWith plug		1
16	205 0071 016	Terminal Ass'y		1
◉ 17	146 1574 103	Inner panel		1
◉ 18	143 0942 009	Window		1
19	113 1753 005	Tact knob (A)		1
20	113 1692 001	*Function knob		1
21	113 1743 002	Tact knob (3 Key)		1
22	113 1636 106	*Push knob (P)		1
23	113 1558 006	Push knob (KAKU)		2
◉ 24	144 2451 106	Front panel		1
⚠ 25	Note	Power trans		1
26	445 8004 007	Wire clamper		5
27	112 0761 008	*Volume knob		1
28	112 0762 007	*Knob		3
◉ 29	102 0565 003	Top cover		1
30	Note	Back panel		1
★	001 0198 009	VinylWire		1
⚠ 32	445 0056 006	Cord bush		1
33	009 0105 012	25P FFC cable		1
34	211 0798 103	Variable resistor 100kohm	VR451	1
35	211 0797 117	Variable resistor 30kohm	VR452	1
36	211 0797 133	Variable resistor 10kohm	VR453	1
37	204 8509 011	2P pin jack (C-GND)	JK301	1
38	205 0971 006	2P push terminal	SP003	1
39	214 0129 001	Relay (DH2TU)	RL481	1
40	214 0187 001	Relay (DH24D2-OS(M)-2)	RL482	1
⚠ 41	Note	Power trans (mini)		1
⚠ 42	214 0188 008	Relay (VS-12MBNR-SM2)(TV-8)	RL551	1
43	205 0972 005	4P push terminal		1
44	204 8503 004	:Headphone jack		1
⚠ 45	212 4778 009	2P push switch	SW001	1
46	205 0952 009	4P speaker terminal		2
47	211 0858 001	Variable resistor 100kohm	VR261	1
48	204 8497 000	4P pin jack (GND)(K)	JK101~103	3
49	204 8509 008	2P pin jack (C-GND)	JK104	1
50	393 4155 002	FLD (FIP14AM7R)	FL701	1
★	212 4789 001	Tact switch	SW701~704, 708~713,719~730	22
52	204 8468 000	2P pin jack	JK601,602	2
53	513 2404 029	Fuse caution label		1
54	Note	AC outlet (2P)		1
★	513 2236 006	Label		
★	513 2377 004	CUL label (1270)		
★	513 2433 003	Serial No.sheet		

SCREWS

Ref. No.	Part No.	Part Name	Remarks	Q'ty
101	473 7002 018	Screw 3×8 (S)		14
102	473 7004 016	Screw 4×6 (S)		4
103	473 7015 005	Screw 3×6 (S) BK		10
104	473 7500 044	Screw 3×8 (P) BK		22
105	473 8007 009	Screw 3×12 cup		8
106	477 0018 001	Washer(P-87)		1
107	477 0064 107	Fixing screw		17
108	477 0263 005	3P swelling screw		4
109	475 6124 003	12 Nut		1

PACKING & ACCESSORIES

Ref. No.	Part No.	Part Name	Remarks	Q'ty
	504 0092 086	Stylen paper	(700×600×T1)	1
	505 0075 006	Cabinet cover	(750×350)	1
	503 1190 007	Cushion		2
	505 8006 019	Envelope		1
	Note	Instructions manual		1
	515 0671 122	S.S.list		1
	399 0292 006	Remoto control unit	RC195	1
	231 0922 009	AM lope antenne		1
	395 0023 008	:*FM antenne Ass'y		1
	Note	Carton case		1
	Note	UPC label		1
	513 1389 006	Control card base		1
	513 1349 004	Thermal carbon film		1
	Note	DELWarranty home		1
	394 0038 003	Battery (GER6M)		2

ADDENDUM PARTS LIST

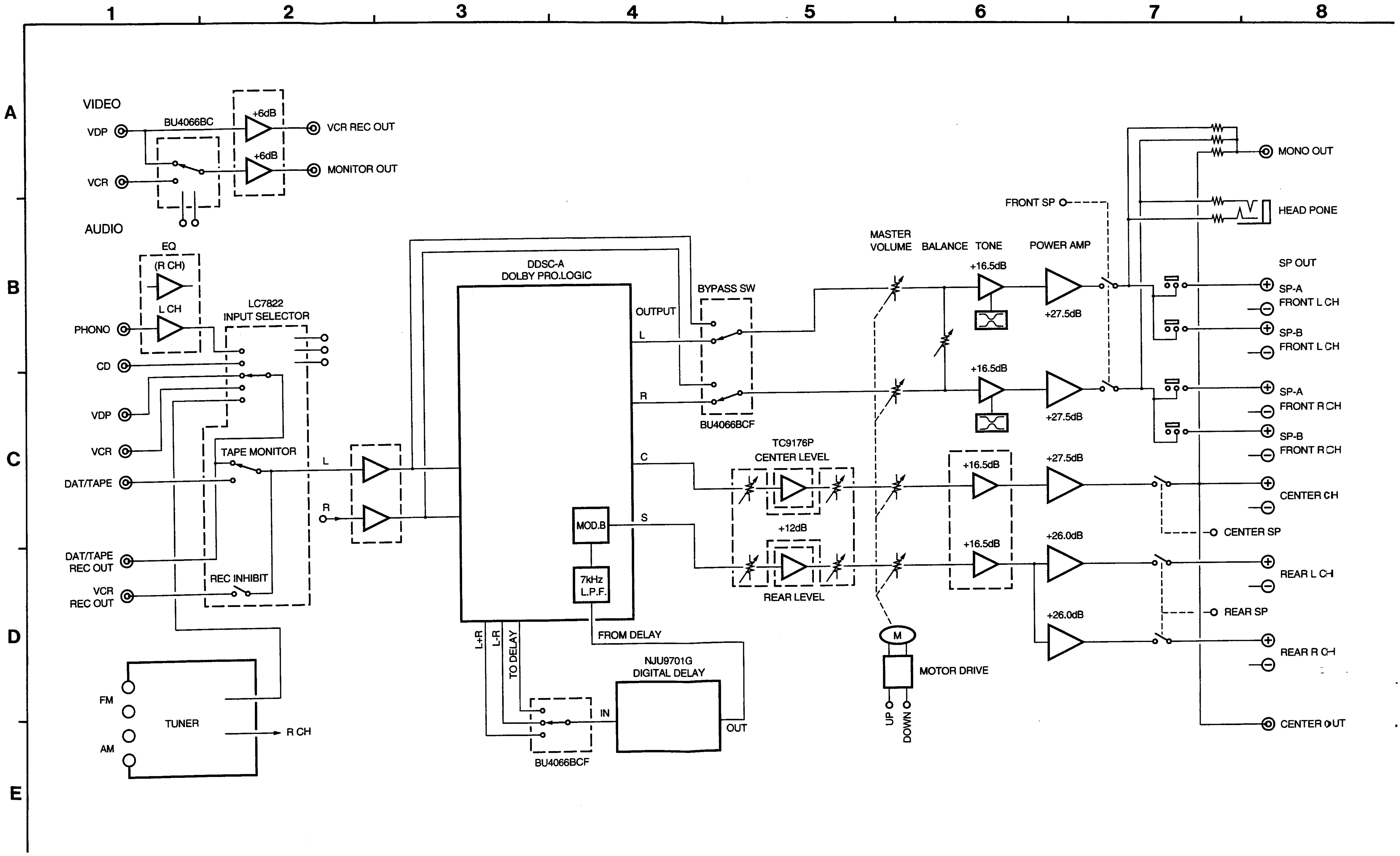
PARTS LIST OF EXPLODED VIEW

Ref.No.	Part Name	Part NO.			
		U.S.A./Canada	Europe	Multi-Voltage	U.K
◉ 1	Main amp. P.W.B. unit Ass'y	1U- 2865	1U- 2865 A	1U- 2865 A	1U- 2865 A
◉ 2	Rear amp. P.W.B. unit Ass'y	1U- 2866	1U- 2866 A	1U- 2866 A	1U- 2866 A
◉ 3	Input and surround P.W.B. unit Ass'y	1U- 2867	1U- 2867 A	1U- 2867 A	1U- 2867 A
◉ 4	FLD and video P.W.B. unit Ass'y	1U- 2883	1U- 2883 A	1U- 2883 A	1U- 2883 A
◉ 5	Tuner and volume P.W.B. unit Ass'y	1U- 2889	1U- 2889 A	1U- 2889 B	1U- 2889 A
⚠ 15	AC cord	206 2050 009	206 2063 009	206 2063 009	206 2131 009
⚠ 25	Power trans	233 6178 004	233 6178 002	233 6178 002	233 6178 002
◉ 30	Back panel	105 1167 001	105 1167 014	105 1167 014	105 1167 014
⚠ 41	Power trans (mini)	233 6073 900	233 6085 001	233 6085 001	233 6085 001
⚠ 54	AC outlet (3P)	203 3941 008	—	—	—

PACKING AND ACCESSORIES

Ref.No.	Part Name	Part NO.			
		U.S.A./Canada	Europe	Multi-Voltage	U.K
	Inst. manual	511 2791 008	511 2800 009	511 2791 008	511 2801 008
	Carton case	501 1887 000	501 1887 000	501 1887 013	501 1887 000
	UPC label	517 0109 027	—	—	—
	DELWarranty	515 0690 006	—	—	—

BLOCK DIAGRAM


1
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7
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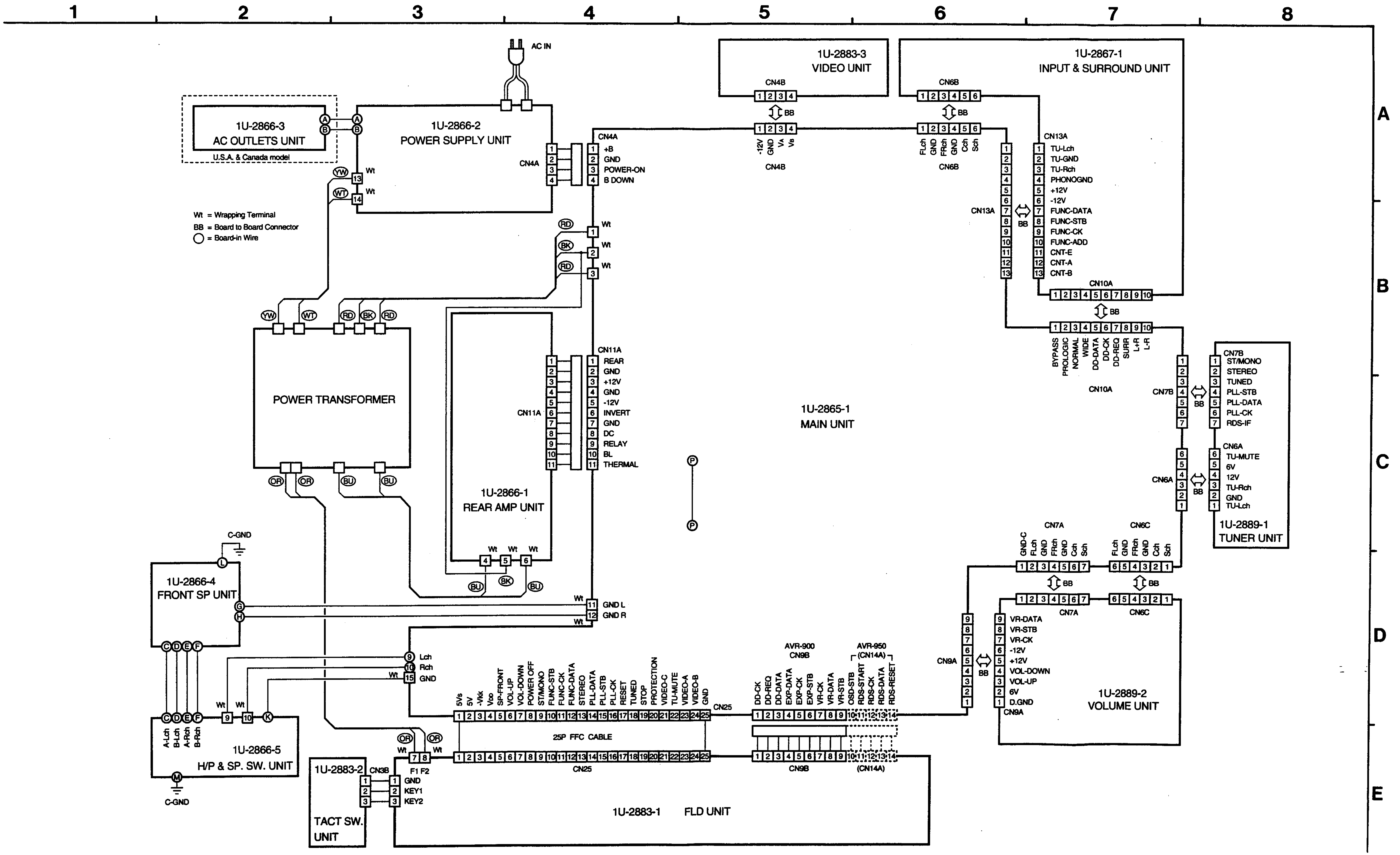
A
B
C
D
E
VIDEO
VDP
VCR
BU4066BC
+6dB
+6dB
VCR REC OUT
MONITOR OUT
AUDIO
EQ
(R CH)
L CH
PHONO
CD
VDP
VCR
DAT/TAPE
DAT/TAPE
REC OUT
VCR
REC OUT
LC7822
INPUT SELECTOR
TAPE MONITOR
REC INHIBIT
L
R
FM
AM
TUNER
R CH
DDSC-A
DOLBY PRO.LOGIC
OUTPUT
L
R
C
S
MOD.B
7kHz
L.P.F.
L+R
L-R
TO DELAY
FROM DELAY
BU4066BCF
IN
NJU9701G
DIGITAL DELAY
OUT
BYPASS SW
BU4066BCF
TC9176P
CENTER LEVEL
+12dB
REAR LEVEL
MASTER
VOLUME
BALANCE
TONE
POWER AMP
+16.5dB
+27.5dB
+16.5dB
+27.5dB
+16.5dB
+27.5dB
+16.5dB
+26.0dB
+26.0dB
M
MOTOR DRIVE
UP
DOWN
FRONT SP
MONO OUT
HEAD PONE
SP OUT
SP-A
FRONT L CH
SP-B
FRONT L CH
SP-A
FRONT R CH
SP-B
FRONT R CH
CENTER CH
CENTER SP
REAR L CH
REAR SP
REAR R CH
CENTER OUT

WIRING DIAGRAM


1
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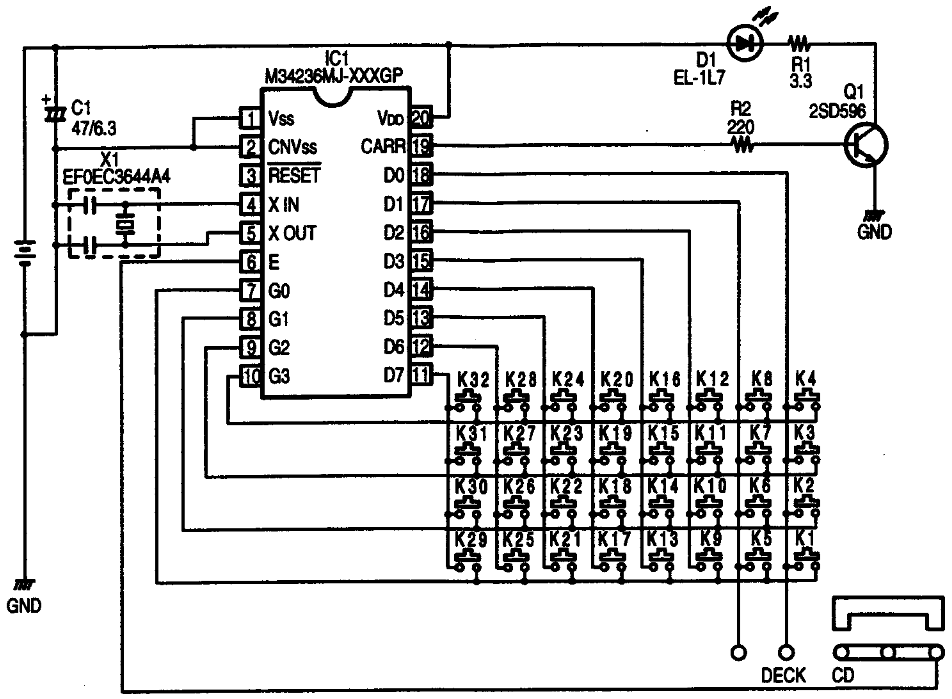
6
7
8
A
B
C
D
E
AC IN
1U-2866-3
AC OUTLETS UNIT
U.S.A. & Canada model
1U-2866-2
POWER SUPPLY UNIT
CN4A
1 +B
2 GND
3 POWER-ON
4 B DOWN
Wt = Wrapping Terminal
BB = Board to Board Connector
◯ = Board-in Wire
YW
WT
RD
BK
OR
BU
Wt
13
14
POWER TRANSFORMER
1U-2866-1
REAR AMP UNIT
CN11A
1 REAR
2 GND
3 +12V
4 GND
5 -12V
6 INVERT
7 GND
8 DC
9 RELAY
10 BL
11 THERMAL
11 GND L
12 GND R
1U-2883-3
VIDEO UNIT
CN4B
-12V
GND
VA
Vs
1U-2867-1
INPUT & SURROUND UNIT
CN6B
FLch
GND
FRch
GND
Cch
Sch
CN13A
1 TU-Lch
2 TU-GND
3 TU-Rch
4 PHONOGND
5 +12V
6 -12V
7 FUNC-DATA
8 FUNC-STB
9 FUNC-CK
10 FUNC-ADD
11 CNT-E
12 CNT-A
13 CNT-B
CN10A
BYPASS
PROLOGIC
NORMAL
WIDE
DD-DATA
DD-CK
DD-REQ
SURR
L+R
L-R
1U-2865-1
MAIN UNIT
P
CN7B
1 ST/MONO
2 STEREO
3 TUNED
4 PLL-STB
5 PLL-DATA
6 PLL-CK
7 RDS-IF
CN6A
6 TU-MUTE
5 6V
4 12V
3 TU-Rch
2 GND
1 TU-Lch
1U-2889-1
TUNER UNIT
CN7A
GND-C
FLch
GND
FRch
GND
Cch
Sch
CN6C
FLch
GND
FRch
GND
Cch
Sch
CN9A
9 VR-DATA
8 VR-STB
7 VR-CK
6 -12V
5 +12V
4 VOL-DOWN
3 VOL-UP
2 6V
1 D.GND
1U-2889-2
VOLUME UNIT
C-GND
1U-2866-4
FRONT SP UNIT
L
G
H
C D E F
9 Lch
10 Rch
15 GND
A-Lch
B-Lch
A-Rch
B-Rch
K
M
1U-2866-5
H/P & SP. SW. UNIT
5Vs
5V
-Vkk
Voo
SP-FRONT
VOL-UP
VOL-DOWN
POWER OFF
ST/MONO
FUNC-STB
FUNC-CK
FUNC-DATA
STEREO
PLL-DATA
PLL-STB
PLL-CK
RESET
TUNED
STOP
PROTECTION
VIDEO-C
TU-MUTE
VIDEO-A
VIDEO-B
GND
CN25
25P FFC CABLE
AVR-900
CN9B
AVR-950
(CN14A)
DD-CK
DD-REQ
DD-DATA
EXP-DATA
EXP-CK
EXP-STB
VR-CK
VR-DATA
VR-STB
OSD-STB
RDS-START
RDS-CK
RDS-DATA
RDS-RESET
1U-2883-2
TACT SW. UNIT
CN3B
1 GND
2 KEY1
3 KEY2
F1 F2
1U-2883-1 FLD UNIT

REMOTE CONTROL UNIT (RC-195)



RC-195 Transmitting Code Table

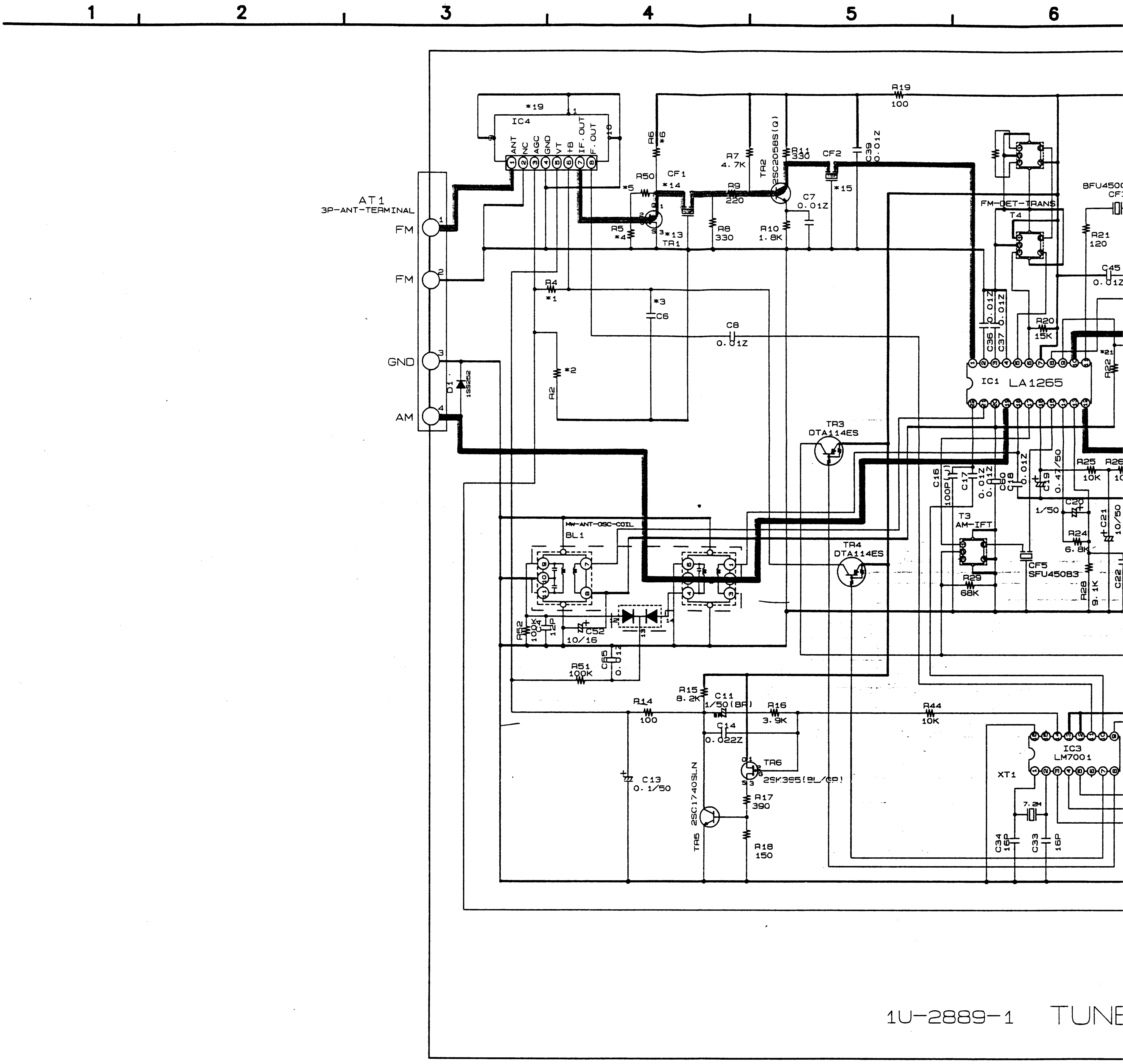
CD

KEY No.	Function	Classification	System address					Data code						Extension		Mask	Judge
			C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	K
1	POWER ON/OFF	AV. AMP	0	1	0	0	0	1	0	0	0	0	0	1	1	0	0
2	DISC SKIP +	CD	0	0	0	1	0	1	1	0	1	0	1	1	0	0	0
3	STOP ■	CD	0	0	0	1	0	0	1	1	1	1	0	1	0	0	0
4	PLAY ▶	CD	0	0	0	1	0	0	0	1	1	1	0	1	0	0	0
5	AUTO SEARCH ⏮	CD	0	0	0	1	0	1	0	0	1	1	0	1	0	0	0
6	PAUSE	CD	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0
7	AUTO SEARCH ⏭	CD	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0
8	PRESET CH. DOWN	TUNER	0	0	1	1	0	1	0	1	0	1	0	1	1	0	0
9	PRESET CH. UP	TUNER	0	0	1	1	0	0	1	1	0	1	0	1	1	0	0
10	CD	AV. AMP	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0
11	PHONO	AV. AMP	0	1	0	0	0	1	1	0	0	0	0	1	1	0	0
12	SHIFT	TUNER	0	0	1	1	0	1	0	1	1	0	0	1	1	0	0
13	TUNER	AV. AMP	0	1	0	0	0	1	0	1	0	0	0	1	1	0	0
14	VCR	AV. AMP	0	1	0	0	0	1	0	1	1	0	0	1	1	0	0
15	VDP/DBS	AV. AMP	0	1	0	0	0	0	1	0	1	0	0	1	1	0	0
16	STEREO	AV. AMP	0	1	0	0	0	1	1	1	0	0	1	1	1	0	0
17	SURR. MODE	AV. AMP	0	1	0	0	0	0	1	1	0	0	1	1	1	0	0
18	V. AUX/GAME	AV. AMP	0	1	0	0	0	0	0	1	1	0	0	1	1	0	0
19	DAT/TAPE MONITOR	AV. AMP	0	1	0	0	0	0	1	0	0	1	0	1	1	0	0
20	T. TONE	AV. AMP	0	1	0	0	0	0	1	0	1	0	1	1	1	0	0
21	DELAY+	AV. AMP	0	1	0	0	0	1	0	0	1	0	1	1	1	0	0
22	MUTING	AV. AMP	0	1	0	0	0	0	0	0	0	1	1	1	1	0	0
23	SCREEN	AV. AMP	0	1	0	0	0	1	1	1	1	1	0	1	1	0	0
24	PANEL	AV. AMP	0	1	0	0	0	0	1	1	1	1	0	1	1	0	0
25	CENTER VOLUME UP	AV. AMP	0	1	0	0	0	1	0	1	0	1	1	1	1	0	0
26	CENTER VOLUME DOWN	AV. AMP	0	1	0	0	0	0	1	1	0	1	1	1	1	0	0
27	REAR VOLUME UP	AV. AMP	0	1	0	0	0	1	1	0	0	1	1	1	1	0	0
28	REAR VOLUME DOWN	AV. AMP	0	1	0	0	0	0	0	1	0	1	1	1	1	0	0
29	MASTER VOLUME UP	AV. AMP	0	1	0	0	0	1	0	0	0	1	1	1	1	0	0
30	MASTER VOLUME DOWN	AV. AMP	0	1	0	0	0	0	1	0	0	1	1	1	1	0	0

DECK

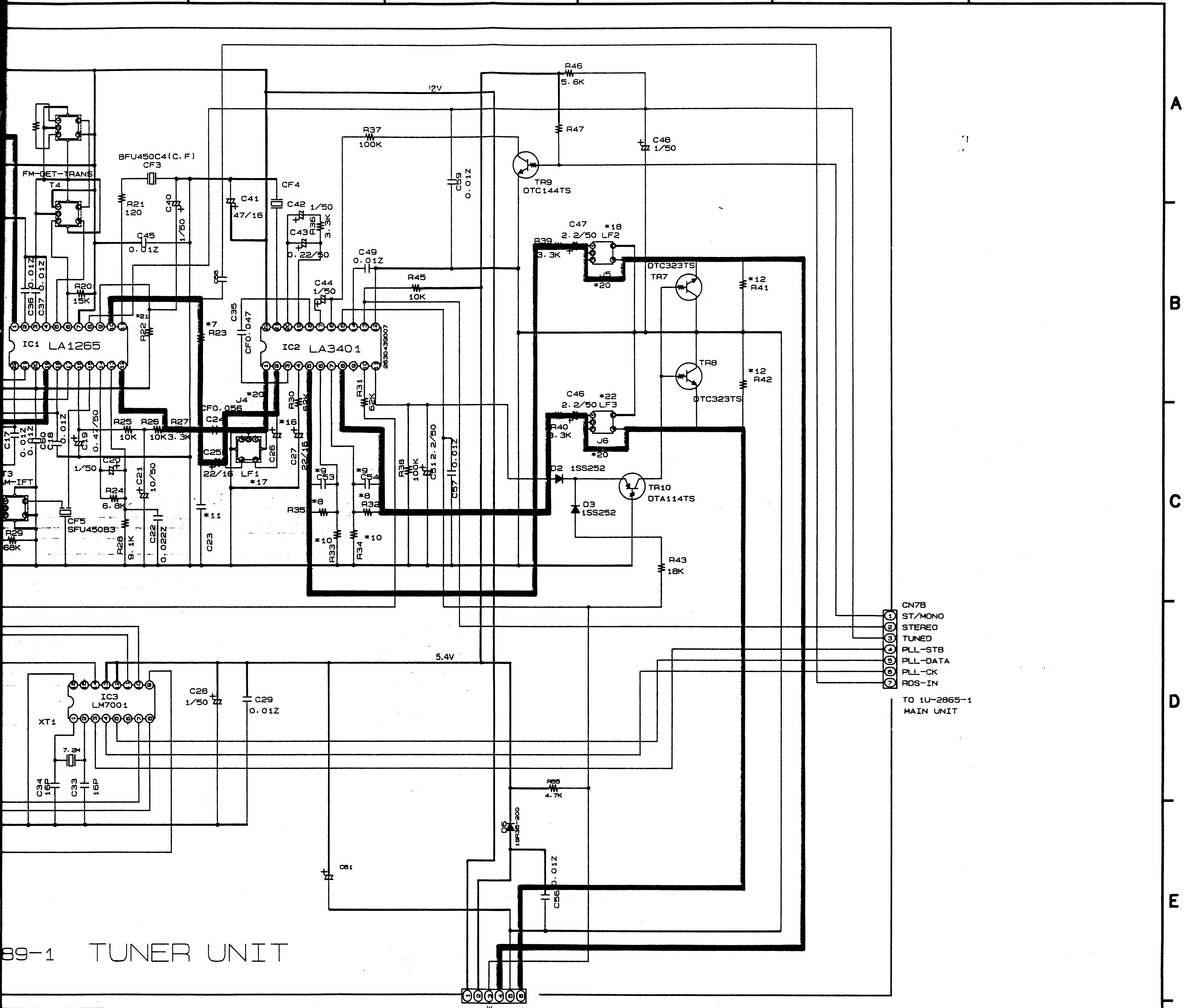
KEY No.	Function	Classification	System address					Data code						Extension		Mask	Judge
			C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	K
1	POWER ON/OFF	AV. AMP	0	1	0	0	0	1	0	0	0	0	0	1	1	0	0
2	PLAY ◀	DECK	0	0	1	0	0	1	1	1	0	1	0	1	0	0	0
3	STOP ■	DECK	0	0	1	0	0	0	1	1	1	1	0	1	0	0	0
4	PLAY ▶	DECK	0	0	1	0	0	0	0	1	1	1	0	1	0	0	0
5	REW ◀◀	DECK	0	0	1	0	0	1	1	0	1	1	0	1	0	0	0
6	A/B	DECK	0	0	1	0	0	1	1	0	0	1	0	1	0	0	0
7	FF ▶▶	DECK	0	0	1	0	0	0	1	0	1	1	0	1	0	0	0
8	PRESET CH. DOWN	TUNER	0	0	1	1	0	1	0	1	0	1	0	1	1	0	0
9	PRESET CH. UP	TUNER	0	0	1	1	0	0	1	1	0	1	0	1	1	0	0
10	CD	AV. AMP	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0
11	PHONO	AV. AMP	0	1	0	0	0	1	1	0	0	0	0	1	1	0	0
12	SHIFT	TUNER	0	0	1	1	0	1	0	1	1	0	0	1	1	0	0
13	TUNER	AV. AMP	0	1	0	0	0	1	0	1	0	0	0	1	1	0	0
14	VCR	AV. AMP	0	1	0	0	0	1	0	1	1	0	0	1	1	0	0
15	VDP/DBS	AV. AMP	0	1	0	0	0	0	1	0	1	0	0	1	1	0	0
16	STEREO	AV. AMP	0	1	0	0	0	1	1	1	0	0	1	1	1	0	0
17	SURR. MODE	AV. AMP	0	1	0	0	0	0	1	1	0	0	1	1	1	0	0
18	V. AUX/GAME	AV. AMP	0	1	0	0	0	0	0	1	1	0	0	1	1	0	0
19	DAT/TAPE MONITOR	AV. AMP	0	1	0	0	0	0	1	0	0	1	0	1	1	0	0
20	T. TONE	AV. AMP	0	1	0	0	0	0	1	0	1	0	1	1	1	0	0
21	DELAY+	AV. AMP	0	1	0	0	0	1	0	0	1	0	1	1	1	0	0
22	MUTING	AV. AMP	0	1	0	0	0	0	0	0	0	1	1	1	1	0	0
23	SCREEN	AV. AMP	0	1	0	0	0	1	1	1	1	1	0	1	1	0	0
24	PANEL	AV. AMP	0	1	0	0	0	0	1	1	1	1	0	1	1	0	0
25	CENTER VOLUME UP	AV. AMP	0	1	0	0	0	1	0	1	0	1	1	1	1	0	0
26	CENTER VOLUME DOWN	AV. AMP	0	1	0	0	0	0	1	1	0	1	1	1	1	0	0
27	REAR VOLUME UP	AV. AMP	0	1	0	0	0	1	1	0	0	1	1	1	1	0	0
28	REAR VOLUME DOWN	AV. AMP	0	1	0	0	0	0	0	1	0	1	1	1	1	0	0
29	MASTER VOLUME UP	AV. AMP	0	1	0	0	0	1	0	0	0	1	1	1	1	0	0
30	MASTER VOLUME DOWN	AV. AMP	0	1	0	0	0	0	1	0	0	1	1	1	1	0	0

SCHEMATIC DIAGRAM


1
2
3
4
5
6
AT1
3P-ANT-TERMINAL
FM
FM
GND
AM
D1 1SS252
*19
IC4
ANT
NC
AGC
GND
VT
+B
IF. OUT
IF. OUT
R6 *6
R50
*5
CF1
*14
R7 4.7K
TR2 2SC2058S(Q)
R11 330
CF2
C39 0.01Z
*15
R19 100
R9 220
R5 *4
*13
TR1
R8 330
R10 1.8K
C7 0.01Z
R4 *1
*3 C6
C8 0.01Z
R2 *2
TR3 DTA114ES
TR4 DTA114ES
MW-ANT-OSC-COIL
BL1
R52 100K
C4 12P
C52 10/16
C55 0.01Z
R51 100K
R15 8.2K
C11 1/50(BP)
R16 3.9K
R14 100
C14 0.022Z
TR6 2SK365(BL/GR)
R17 390
R18 150
C13 0.1/50
TR5 2SC1740SLN
R44 10K
FM-DET-TRANS
T4
BFU450
R21 120
C45 0.01Z
C36 0.01Z
C37 0.01Z
R20 15K
*21
R22
IC1 LA1265
C16 100P(J)
C17 0.01Z
C18 0.01Z
C19 0.47/50
R25 10K
R26
T3 AM-IFT
C20 1/50
C21 10/50
R24 6.8K
CF5 SFU450B3
R29 68K
R28 9.1K
C22
IC3 LM7001
XT1
7.2M
C34 16P
C33 16P
1U-2889-1
TUNE

		900E3	900E1	900E2/EK
*1	R4	———	———	10K
2	R2	———	———	5.6K
3	C6	———	———	CK0.01
4	R5	1K	1K	390
5	R50	100	100	———
6	R6	———	———	330
7	R23	JUMPER	JUMPER	1.6K
8	R32.35	100K	100K	150K
9	C53.54	CC750P	CC750P	CC330P
10	R33.34	120K	120K	200K
11	C23	CC100P	CC100P	———
12	R41.42	6.8K	6.8K	3.3K
13	TR1	———	———	2SK161
14	CF1	CFSK107M1-A	CFSK107M1-A	CFSK107M2-A
15	CF2	CFSK107M2-A	CFSK107M2-A	CFSK107M2-A
16	C26	———	———	22/16
17	LF1	———	———	ANTI-BIRDIE FILTER
18	LF2.3	———	———	LPF
19	IC4	F/E 2160102008	F/E 2160102008	F/E 2160079005
20	J4.5.6	JUMPER	JUMPER	———
21	R22	18K	39K	39K
22	LF4	———	———	2329010009
23	C55	———	———	CC120P

6 7 8 9 10 11


A
B
C
D
E
F
G
H
12V
R46
5.6K
R47
R37
100K
C59
0.01Z
TR9
DTC144TS
C48
1/50
SFU450C4(C.F)
CF3
FM-DET-TRANS
T4
R21
120
C40
1/50
C41
47/16
CF4
C42 1/50
C43
R36
3.3K
0.22/50
C45
0.01Z
C49
0.01Z
C47
2.2/50
*18
LF2
R39
3.3K
J5
*20
DTC323TS
TR7
*12
R41
R45
10K
C44
1/50
C36
0.01Z
C37
0.01Z
R20
15K
*21
R22
*7
R23
C35
CF0.047
IC1 LA1265
IC2 LA3401
TR8
*12
R42
DTC323TS
C46
2.2/50
*22
LF3
R40
3.3K
J6
*20
*20
J4
CF0.056
C24
R30
62K
R31
62K
*16
C25
C26
C27
22/16
LF1
*17
22/16
R25
10K
R26
10K
R27
3.3K
C17
0.01Z
C18
0.01Z
C50
0.01Z
C19
0.47/50
C20
1/50
C21
10/50
R24
6.8K
*11
T3
AM-IFT
CF5
SFU450B3
R29
68K
R28
9.1K
C22
0.022Z
C23
*9
C53
*9
C54
*8
*8
R32
R35
*10
R33
R34
*10
R38
100K
C51
2.2/50
C57
0.01Z
D2 1SS252
D3
1SS252
TR10
DTA114TS
R43
18K
CN7B
① ST/MONO
② STEREO
③ TUNED
④ PLL-STB
⑤ PLL-DATA
⑥ PLL-CK
⑦ RDS-IN
TO 1U-2865-1
MAIN UNIT
5.4V
IC3
LM7001
XT1
7.2M
C34
16P
C33
16P
C28
1/50
C29
0.01Z
R55
4.7K
D5
C61
C56
0.01Z
89-1 TUNER UNIT
12V
6V
TU-MUTE
L
GND
R
CN6A
TO 1U-2865-1
MAIN UNIT
+B LINE
SIGNAL LINE

900E2/EK
OK
.6K
KO.01
390
———
330
.6K
50K
C330P
OOK
———
.3K
SK161
CFSK107M2-A
CFSK107M2-A
2/16
NTI-BIRDIE ILTER
PF
/E 2160079005
———
39K
2329010009
CC120P

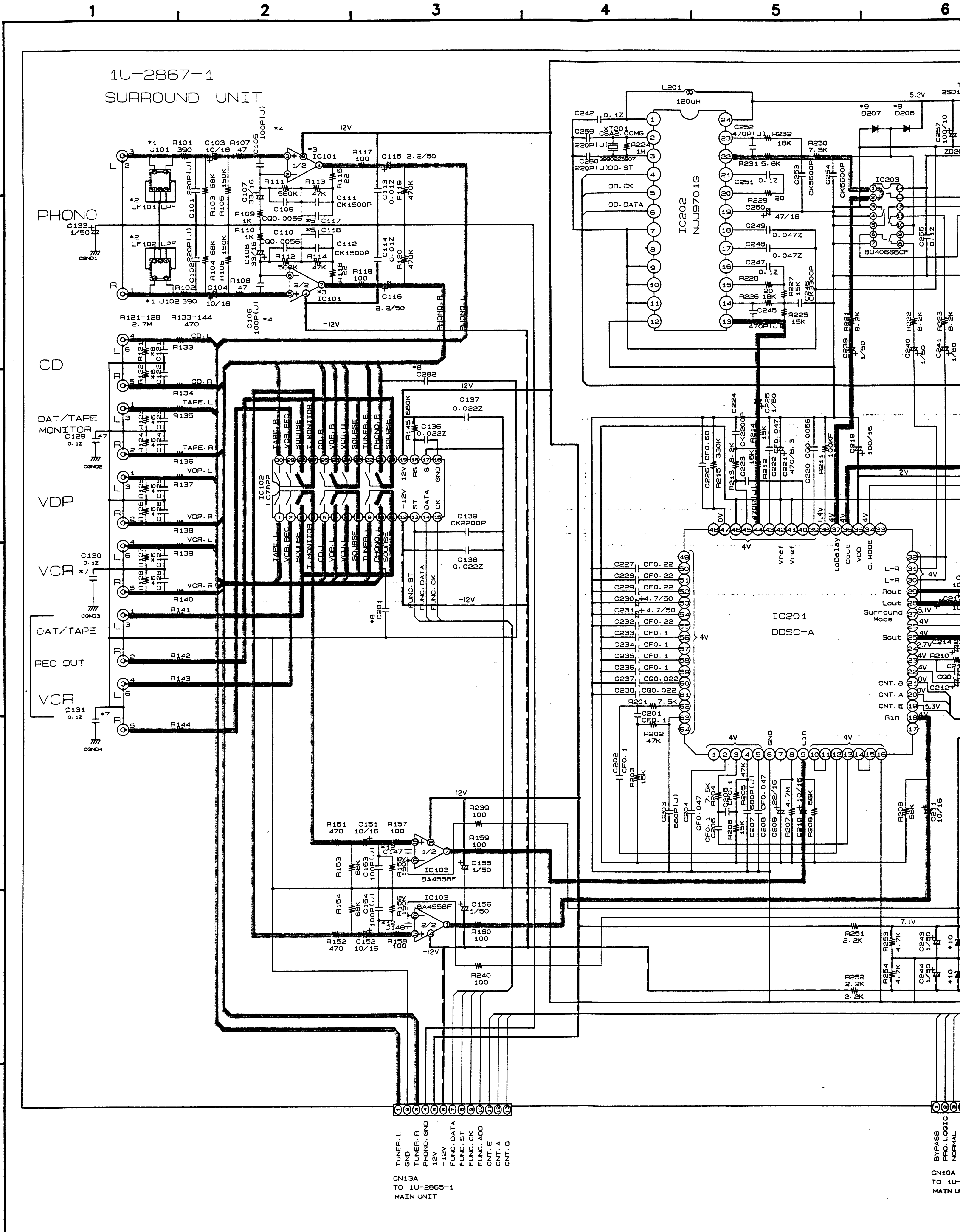
NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▇ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAM

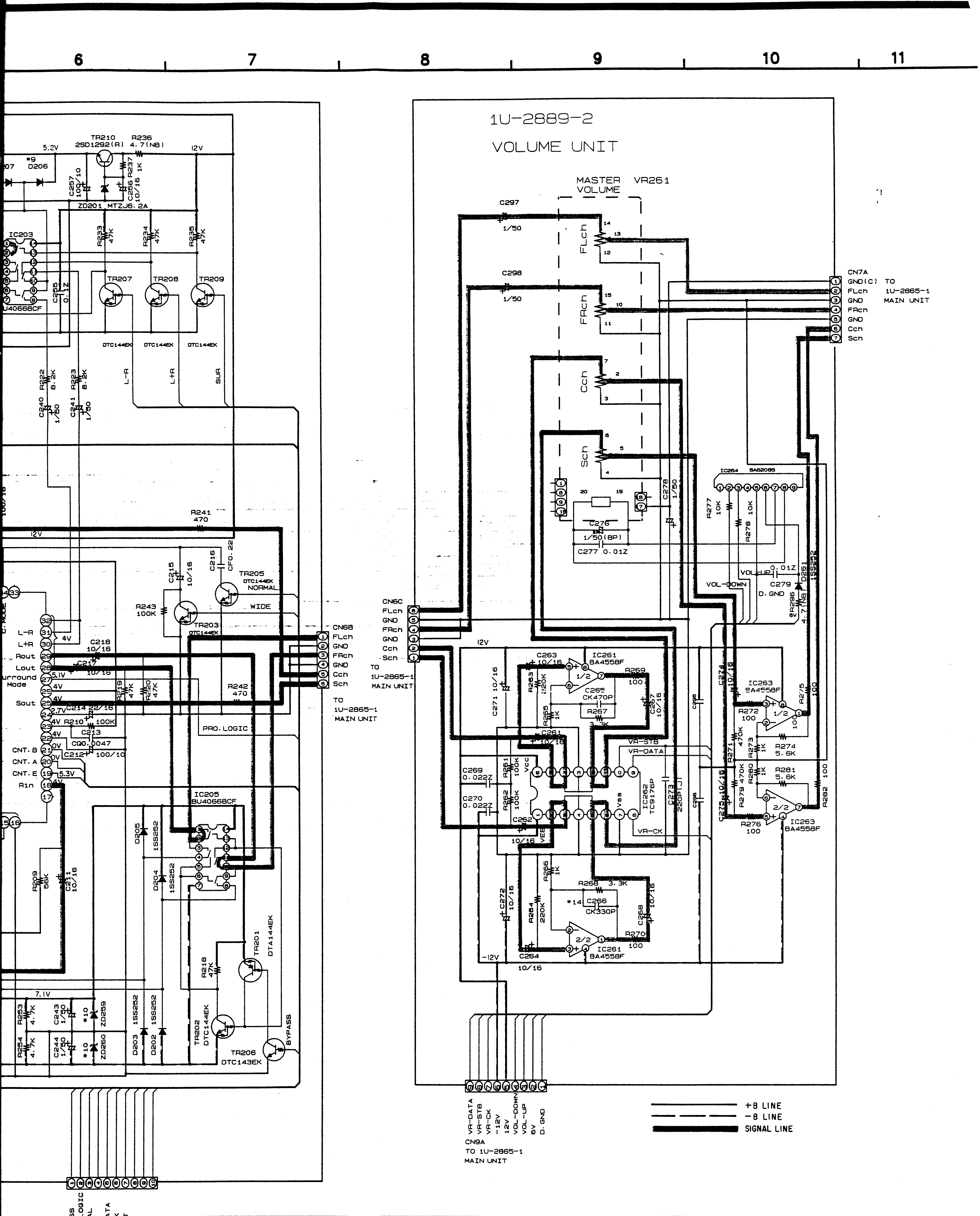

1
2
3
4
5
6
A
B
C
D
E
F
G
H
1U-2867-1
SURROUND UNIT
PHONO
CD
DAT/TAPE MONITOR
VDP
VCR
DAT/TAPE
REC OUT
VCR
J101
J102
LF101 LPF
LF102 LPF
IC101
IC102 LC7822
IC103 BA4558F
IC201
DDSC-A
IC202 NJU9701G
IC203
BU4066BCF
L201 120uH
XT201 CSA2.00MG
DD. CK
DD. DATA
TAPE. L
TAPE. R
CD. L
CD. R
VDP. L
VDP. R
VCR. L
VCR. R
PHONO. R
PHONO. L
FUNC. ST
FUNC. DATA
FUNC. CK
12V
-12V
5.2V
7.1V
Vref
toDelay
Cout
VDD
C. MODE
L-R
L+R
Rout
Lout
Surround Mode
Sout
CNT. B
CNT. A
CNT. E
Rin
Lin
GND
TUNER. L
GND
TUNER. R
PHONO. GND
12V
-12V
FUNC. DATA
FUNC. ST
FUNC. CK
FUNC. ADD
CNT. E
CNT. A
CNT. B
CN13A
TO 1U-2865-1
MAIN UNIT
BYPASS
PRO. LOGIC
NORMAL
CN10A
TO 1U-
MAIN U

NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ■ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

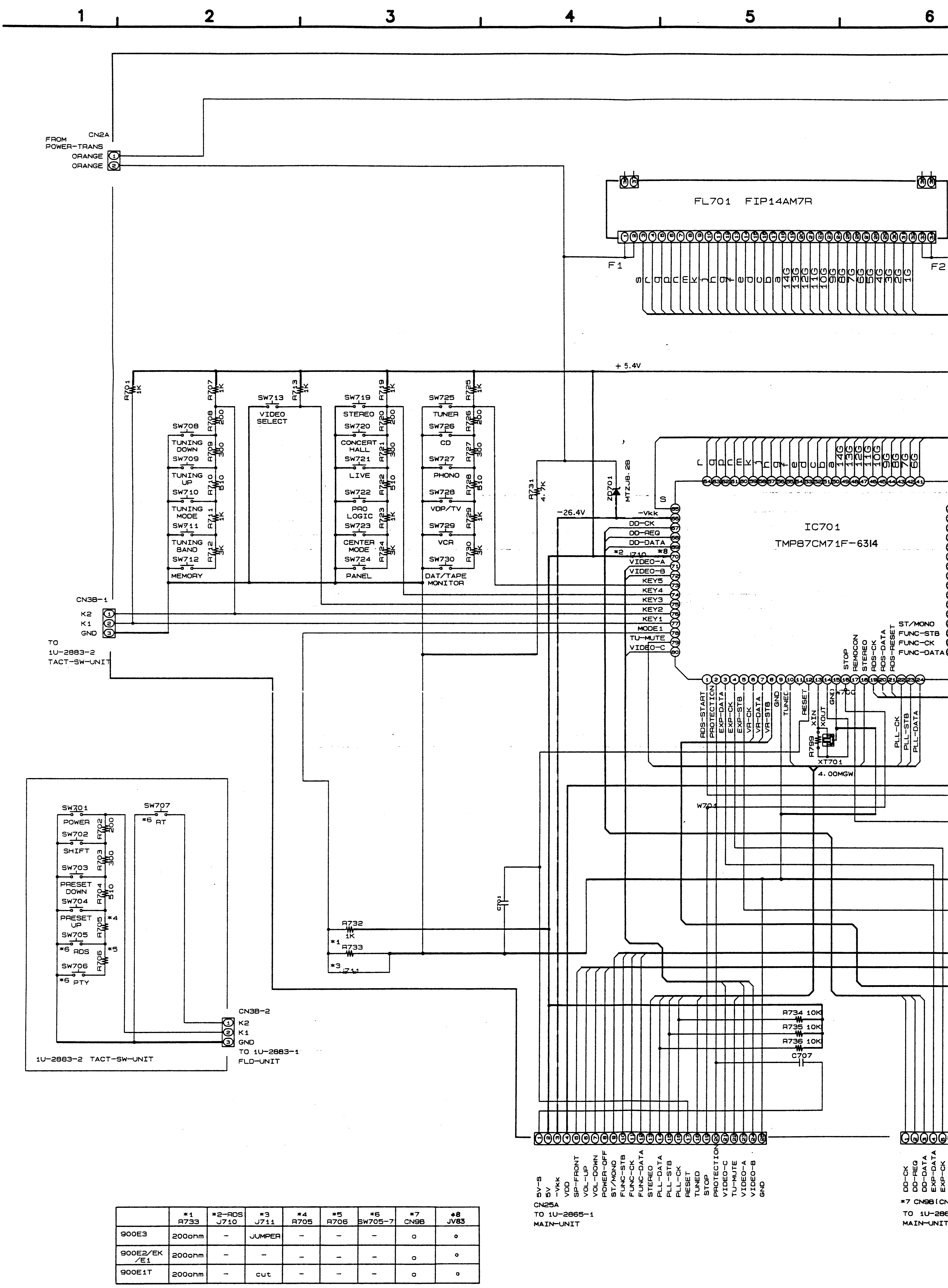
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

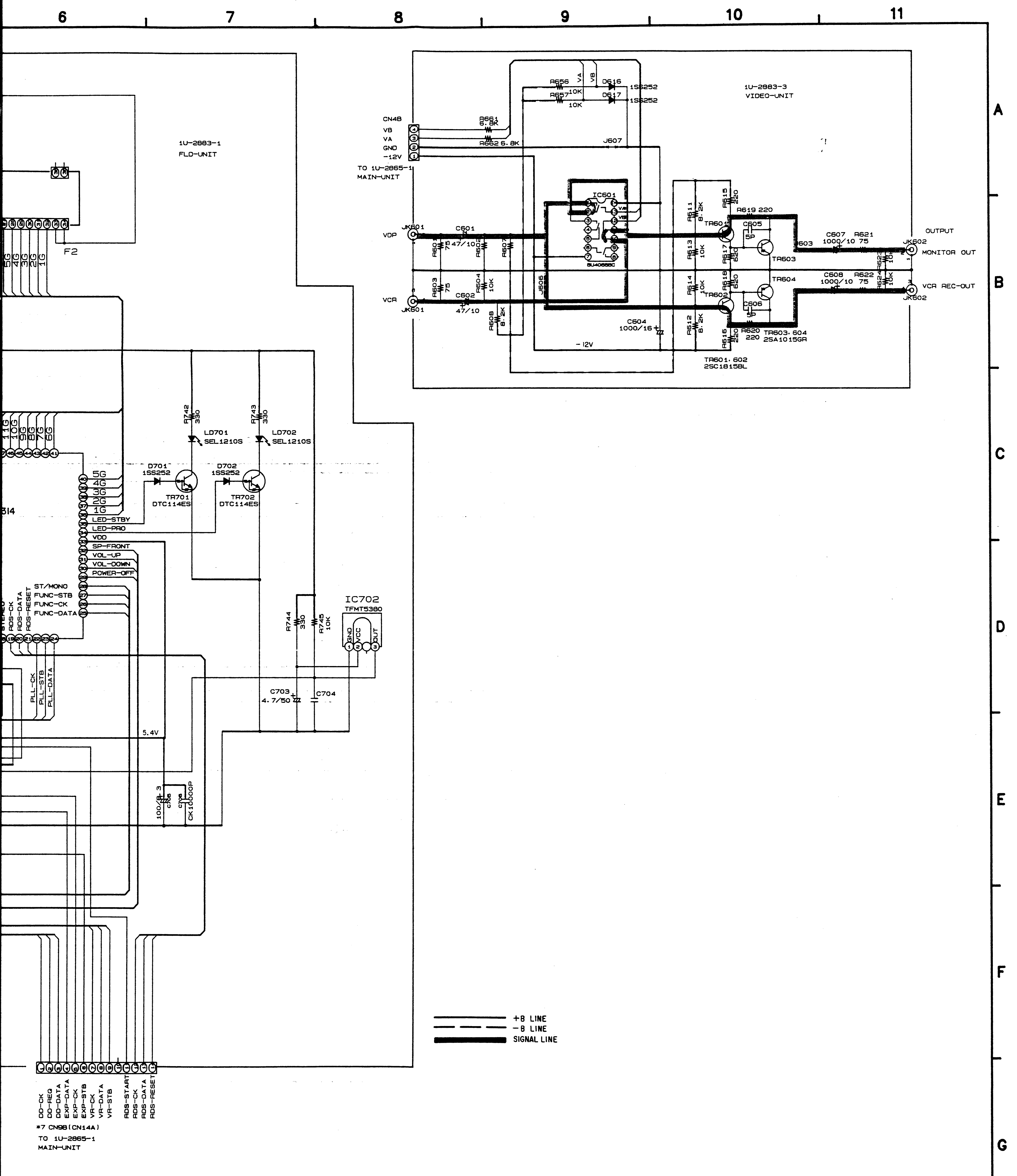

6
7
8
9
10
11
1U-2889-2
VOLUME UNIT
MASTER VOLUME
VR261
FLch
FRch
Cch
Sch
C297
1/50
C298
1/50
C276
1/50(BP)
C277 0.01Z
C278 1/50
CN7A
GND(C)
FLch
GND
FRch
GND
Cch
Sch
TO 1U-2865-1 MAIN UNIT
IC264 BA6208S
R277 10K
R278 10K
VOL-UP
VOL-DOWN
C279 0.01Z
D. GND
D251 1SS252
R296 4.7(NB)
CN6C
FLch
GND
FRch
GND
Cch
Sch
TO 1U-2865-1 MAIN UNIT
12V
-12V
C263 10/16
IC261 BA4558F
R269 100
C265 CK470P
R267
3.3K
R263 220K
R265 1K
C267 10/16
C271 10/16
C261 10/16
VR-STB
VR-DATA
VR-CK
IC262 TC9176P
C273 220P(J)
C269 0.022Z
C270 0.022Z
R261 100K
R262 100K
Vcc
VEE
Vss
C262 10/16
R266 1K
R268 3.3K
*14
C266 CK330P
C268 10/16
C272 10/16
R264 220K
R270 100
C264 10/16
IC263 BA4558F
C274 10/16
C275 10/16
R271 470K
R272 100
R273 1K
R274 5.6K
R275 100
R279 470K
R280 1K
R281 5.6K
R282 100
R276 100
CN9A
VR-DATA
VR-STB
VR-CK
-12V
12V
VOL-DOWN
VOL-UP
5V
D. GND
TO 1U-2865-1 MAIN UNIT
+B LINE
-B LINE
SIGNAL LINE
TR210 2SD1292(R)
R236 4.7(NB)
5.2V
12V
*9 D206
C257 100/10
C256 10/16
R237 1K
ZD201 MTZJ6.2A
IC203
U4066BCF
C255 0.1Z
R233 47K
R234 47K
R235 47K
TR207
TR208
TR209
DTC144EK
L-R
L+R
SUR
R222 8.2K
R223 8.2K
C240 1/50
C241 1/50
R241 470
12V
C215 10/16
C216 CF0.22
TR205 DTC144EK
NORMAL
WIDE
R243 100K
TR203 DTC144EK
CN6B
FLch
GND
FRch
GND
Cch
Sch
TO 1U-2865-1 MAIN UNIT
C.MODE
L-R
L+R
Rout
Lout
Surround Mode
Sout
CNT. B
CNT. A
CNT. E
Rin
4V
C218 10/16
C217 10/16
5.1V
R219 47K
R220 47K
R242 470
2.7V
C214 22/16
R210 100K
C213 CQ0.0047
C212 100/10
5.3V
PRO. LOGIC
IC205 BU4066BCF
D205 1SS252
D204 1SS252
R209 56K
C211 10/16
R218 47K
TR201 DTA144EK
7.1V
R253 4.7K
R254 4.7K
C243 1/50
C244 1/50
*10
ZD259
ZD260
D203 1SS252
D202 1SS252
TR202 DTC144EK
TR206 DTC143EK
BYPASS
BYPASS
PRO.LOGIC
NORMAL
WIDE
DD.DATA
DD.CK
DD.ST
SUR
L+R
L-R
CN10A
TO 1U-2865-1
MAIN UNIT

	*1	*2	*3	*4	*5	*6	*7	*8	*9	*10	*11	*12	*13
	J101 J102	LF101 LF102	IC101	C105 C106	C117 C118	C121-128	C129-131	C281 C282	D206 D207	ZD259 ZD260	CN3C	C147 C148	C266
900 E3	JW	——	BA4558F	——	——	——	——	——	——	——	——	——	CK330P
900 E2/EK/E1	4.7K	FTZ-COIL	NJM-2068MD	100P	——	CC56p	——	CQ0.001	——	——	——	CC100p	CK1200P

SCHEMATIC DIAGRAM


1
2
3
4
5
6
CN2A
FROM POWER-TRANS
ORANGE
ORANGE
FL701 FIP14AM7R
F1
F2
+ 5.4V
-26.4V
R701 1K
R707 1K
R708 200
R709 300
R710 510
R711 1K
R712 3K
SW708
TUNING DOWN
SW709
TUNING UP
SW710
TUNING MODE
SW711
TUNING BAND
SW712
MEMORY
SW713
VIDEO SELECT
R713 1K
SW719
STEREO
SW720
CONCERT HALL
SW721
LIVE
SW722
PRO LOGIC
SW723
CENTER MODE
SW724
PANEL
R719 1K
R720 200
R721 300
R722 510
R723 1K
R724 3K
SW725
TUNER
SW726
CD
SW727
PHONO
SW728
VDP/TV
SW729
VCR
SW730
DAT/TAPE MONITOR
R725 1K
R726 200
R727 300
R728 510
R729 1K
R730 3K
R731 4.7K
ZD701 MTZJ6.2B
IC701
TMP87CM71F-6314
CN38-1
K2
K1
GND
TO 1U-2883-2 TACT-SW-UNIT
SW701
POWER
SW702
SHIFT
SW703
PRESET DOWN
SW704
PRESET UP
SW705
*6 RDS
SW706
*6 PTY
R702 200
R703 300
R704 510
R705 *4
R706 *5
SW707
*6 RT
CN38-2
K2
K1
GND
TO 1U-2883-1 FLD-UNIT
1U-2883-2 TACT-SW-UNIT
R732 1K
*1 R733
*3 J711
C701
-Vkk
DD-CK
DD-REQ
DD-DATA
*2 J710 *8
VIDEO-A
VIDEO-B
KEY5
KEY4
KEY3
KEY2
KEY1
MODE1
TU-MUTE
VIDEO-C
RDS-START
PROTECTION
EXP-DATA
EXP-CK
EXP-STB
VR-CK
VR-DATA
VR-STB
GND
TUNED
RESET
XIN
XOUT
GND
VDD
STOP
REMOCON
STEREO
RDS-CK
RDS-DATA
RDS-RESET
ST/MONO
FUNC-STB
FUNC-CK
FUNC-DATA
PLL-CK
PLL-STB
PLL-DATA
R799
XT701
4.00MGW
W701
R734 10K
R735 10K
R736 10K
C707
5V-B
5V
-Vkk
VDD
SP-FRONT
VOL-UP
VOL-DOWN
POWER-OFF
ST/MONO
FUNC-STB
FUNC-CK
FUNC-DATA
STEREO
PLL-DATA
PLL-STB
PLL-CK
RESET
TUNED
STOP
PROTECTION
VIDEO-C
TU-MUTE
VIDEO-A
VIDEO-B
GND
CN25A
TO 1U-2865-1 MAIN-UNIT
DD-CK
DD-REQ
DD-DATA
EXP-DATA
EXP-CK
*7 CN9B
TO 1U-286
MAIN-UNIT

	*1 R733	*2-RDS J710	*3 J711	*4 R705	*5 R706	*6 SW705-7	*7 CN9B	*8 JV83
900E3	200ohm	–	JUMPER	–	–	–	o	o
900E2/EK/E1	200ohm	–	–	–	–	–	o	o
900E1T	200ohm	–	cut	–	–	–	o	o


6
7
8
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10
11
A
B
C
D
E
F
G
H
1U-2883-1
FLD-UNIT
1U-2883-3
VIDEO-UNIT
CN48
VB
VA
GND
-12V
TO 1U-2865-1
MAIN-UNIT
R656 10K
R657 10K
D616 1SS252
D617 1SS252
R661 6.8K
R662 6.8K
J607
IC601
BU4066BC
JK601
VDP
VCR
C601 47/10
C602 47/10
R601 75
R603 75
R602
R604 10K
R607
R608 8.2K
J606
C604 1000/16
-12V
R611 8.2K
R613 10K
R614 10K
R612 8.2K
R615 220
R616 220
R617 820
R618 820
R619 220
R620 220
C605 5P
C606 5P
TR601
TR602
TR603
TR604
C607 1000/10
R621 75
C608 1000/10
R622 75
R623 10K
R624 10K
JK602
OUTPUT
MONITOR OUT
VCR REC-OUT
TR603, 604 2SA1015GR
TR601, 602 2SC1815BL
F2
5G
4G
3G
2G
1G
11G
10G
9G
8G
7G
6G
LED-STBY
LED-PRO
VDD
SP-FRONT
VOL-UP
VOL-DOWN
POWER-OFF
ST/MONO
FUNC-STB
FUNC-CK
FUNC-DATA
RDS-CK
RDS-DATA
RDS-RESET
PLL-CK
PLL-STB
PLL-DATA
R742 330
R743 330
LD701 SEL1210S
LD702 SEL1210S
D701 1SS252
D702 1SS252
TR701 DTC114ES
TR702 DTC114ES
IC702
TFMT5380
GND
VCC
OUT
R744 330
R745 10K
C703 4.7/50
C704
5.4V
100/6.3
C705
C706
CK10000P
DD-CK
DD-REQ
DD-DATA
EXP-DATA
EXP-CK
EXP-STB
VR-CK
VR-DATA
VR-STB
RDS-START
RDS-CK
RDS-DATA
RDS-RESET
*7 CN98(CN14A)
TO 1U-2865-1
MAIN-UNIT
+B LINE
-B LINE
SIGNAL LINE

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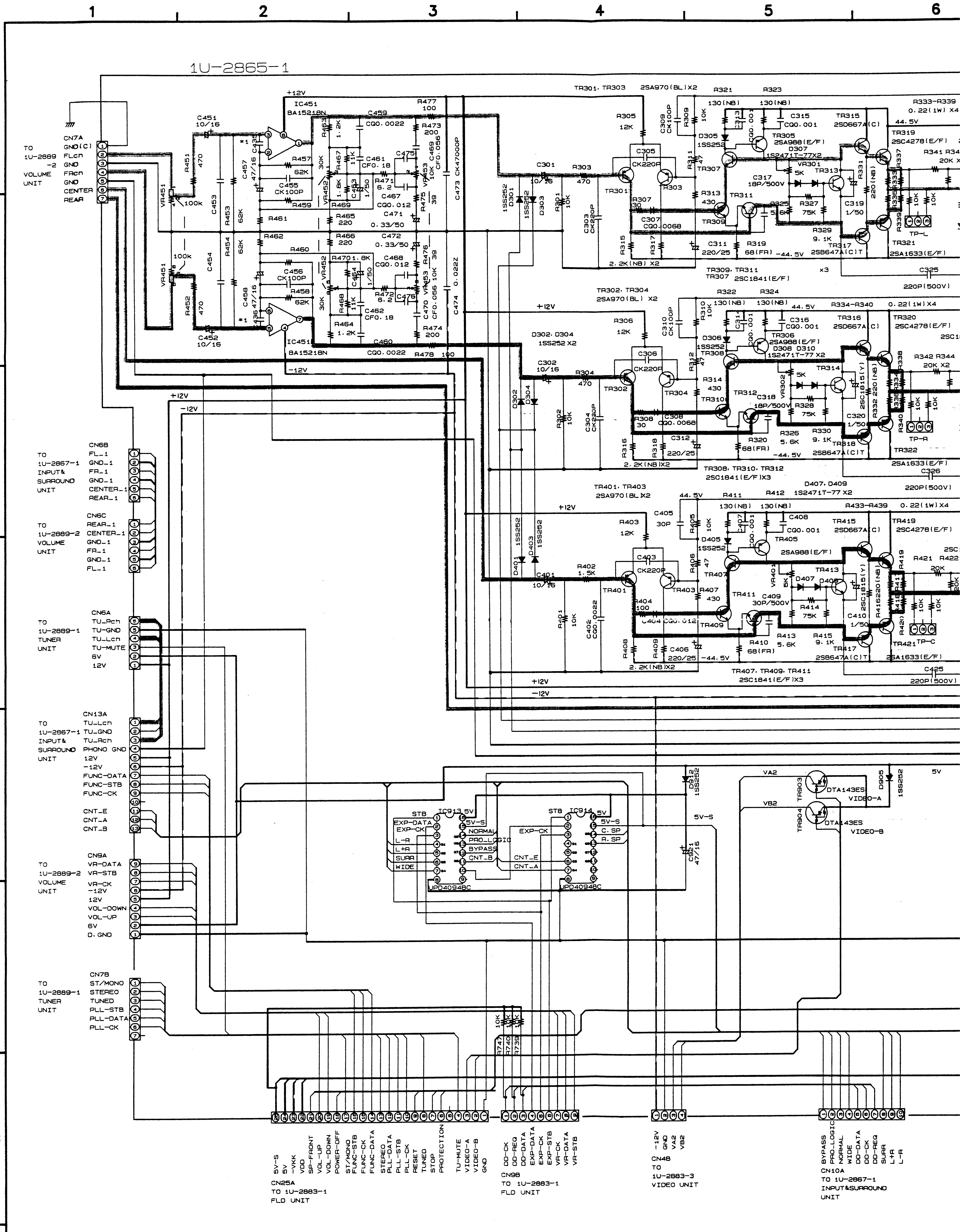
SCHEMATIC DIAGRAM


1 2 3 4 5 6
A B C D E F G H
1U-2865-1
TO 1U-2889-2 VOLUME UNIT
CN7A GND(C) FLch GND FRch GND CENTER REAR
IC451 BA15218N
VR451 100k
VR452
TR301, TR303 2SA970(BL)X2
TR302, TR304 2SA970(BL) X2
TR401, TR403 2SA970(BL)X2
TR305 2SA988(E/F)
TR306 2SA988(E/F)
TR405 2SA988(E/F)
TR315 2SD667A(C)
TR316 2SD667A(C)
TR415 2SD667A(C)
TR319 2SC4278(E/F)
TR320 2SC4278(E/F)
TR419 2SC4278(E/F)
TR321 2SA1633(E/F)
TR322 2SA1633(E/F)
TR309, TR311 TR307 2SC1841(E/F) x3
TR308, TR310, TR312 2SC1841(E/F)X3
TR407, TR409, TR411 2SC1841(E/F)X3
D307 1S2471T-77X2
D308 D310 1S2471T-77 X2
D407, D409 1S2471T-77 X2
D302, D304 1SS252 X2
R333–R339 0.22(1W) X4
R334–R340 0.22(1W)X4
R433–R439 0.22(1W)X4
C325 220P(500V)
C326 220P(500V)
C425 220P(500V)
TP-L
TP-R
TP-C
+12V
-12V
44.5V
-44.5V
TO 1U-2867-1 INPUT& SURROUND UNIT
CN6B FL_1 GND_1 FR_1 GND_1 CENTER_1 REAR_1
TO 1U-2889-2 VOLUME UNIT
CN6C REAR_1 CENTER_1 GND_1 FR_1 GND_1 FL_1
TO 1U-2889-1 TUNER UNIT
CN6A TU_Rch TU_GND TU_Lch TU_MUTE 6V 12V
TO 1U-2867-1 INPUT& SURROUND UNIT
CN13A TU_Lch TU_GND TU_Rch PHONO GND 12V -12V FUNC-DATA FUNC-STB FUNC-CK CNT_E CNT_A CNT_B
TO 1U-2889-2 VOLUME UNIT
CN9A VR-DATA VR-STB VR-CK -12V 12V VOL-DOWN VOL-UP 6V D.GND
TO 1U-2889-1 TUNER UNIT
CN7B ST/MONO STEREO TUNED PLL-STB PLL-DATA PLL-CK
IC913 UPD4094BC
IC914 UPD4094BC
STB EXP-DATA EXP-CK L-R L+R SURR WIDE
5V-S NORMAL PRO_LOGIC BYPASS CNT_B CNT_E CNT_A
5V-S C.SP R.SP
TR903 DTA143ES VIDEO-A
TR904 DTA143ES VIDEO-B
VA2 VB2 5V 5V-S
D905 1SS252
D912 1SS252
C921 47/16
R747 R740 R739 10K
5V-S 5V -VKK VDD SP-FRONT VOL-UP VOL-DOWN POWER-OFF ST/MONO FUNC-STB FUNC-CK FUNC-DATA STEREO PLL-DATA PLL-STB PLL-CK RESET TUNED STOP PROTECTION TU-MUTE VIDEO-A VIDEO-B GND
CN25A TO 1U-2883-1 FLD UNIT
DD-CK DD-REQ DD-DATA EXP-DATA EXP-CK EXP-STB VR-CK VR-DATA VR-STB
CN9B TO 1U-2883-1 FLD UNIT
-12V GND VA2 VB2
CN4B TO 1U-2883-3 VIDEO UNIT
BYPASS PRO_LOGIC NORMAL WIDE DD-DATA DD-CK DD-REQ SURR L+R L-R
CN10A TO 1U-2867-1 INPUT&SURROUND UNIT

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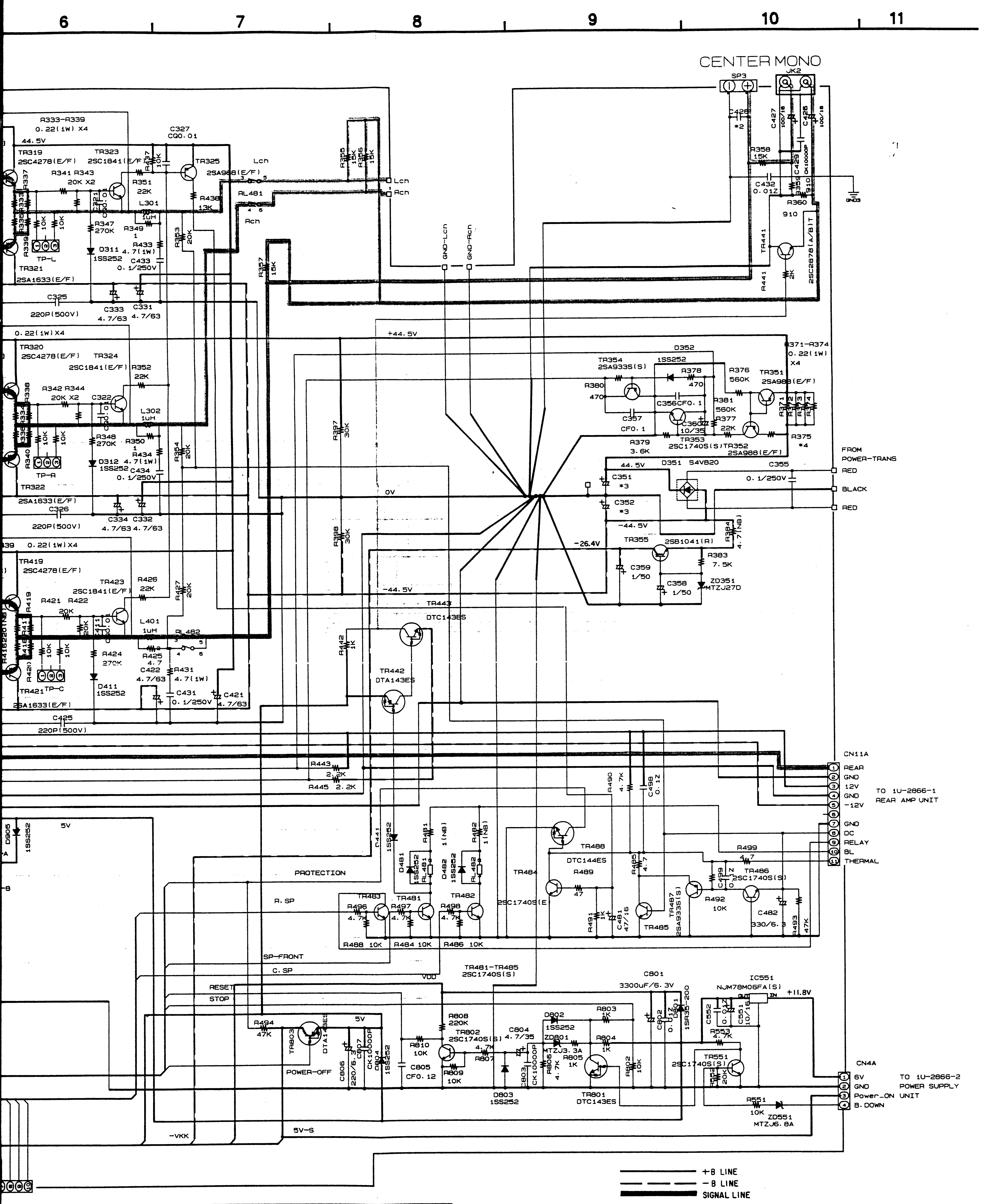
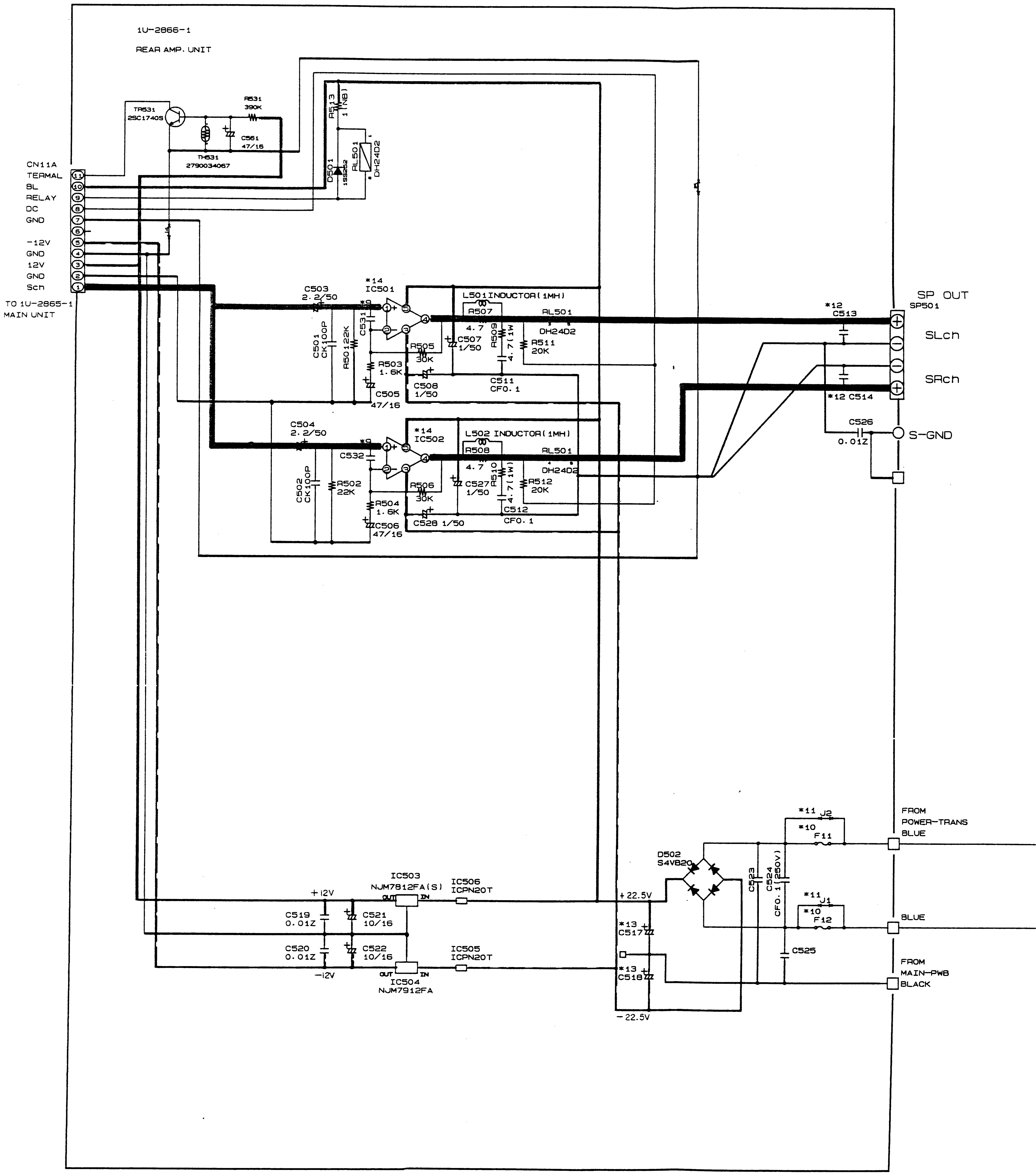

6
7
8
9
10
11
CENTER MONO
SP3
JK2
C428 *2
C427 100/16
C425 100/16
R358 15K
C429 CK10000P
C432 0.01Z
R359 910
R360 910
TR441 2SC2878(A/B)T
R441
2K
R333–R339 0.22(1W) X4
44.5V
TR319 2SC4278(E/F)
TR323 2SC1841(E/F)
C327 CQ0.01
TR325 2SA988(E/F)
R341 R343 20K X2
R351 22K
L301 1uH
R347 270K
R349 1
D311 1SS252
R433 4.7(1W)
C433 0.1/250V
R353 20K
R437 10K
R438 13K
TP-L
TR321 2SA1633(E/F)
C325 220P(500V)
C333 4.7/63
C331 4.7/63
Lch
Rch
RL481
R355 15K
R356 15K
R357 15K
GND-Lch
GND-Rch
+44.5V
0.22(1W)X4
TR320 2SC4278(E/F)
TR324 2SC1841(E/F)
R352 22K
R342 R344 20K X2
C322
L302 1uH
R348 270K
R350 1
R434 4.7(1W)
D312 1SS252
C434 0.1/250V
R354 20K
TP-R
TR322 2SA1633(E/F)
C326 220P(500V)
C334 C332 4.7/63 4.7/63
R397 30K
R398 30K
0V
TR354 2SA933S(S)
D352 1SS252
R378 470
R380 470
C357 CF0.1
C356 CF0.1
C360 10/35
R381 560K
R377 22K
R376 560K
TR351 2SA988(E/F)
R371–R374 0.22(1W) X4
R379 3.6K
TR353 2SC1740S(S)
TR352 2SA988(E/F)
R375 *4
44.5V
D351 S4VB20
C355 0.1/250V
C351 *3
C352 *3
FROM POWER-TRANS
RED
BLACK
RED
-44.5V
-26.4V
TR355 2SB1041(R)
R384 4.7(NB)
R383 7.5K
C359 1/50
C358 1/50
ZD351 MTZJ27D
-44.5V
0.22(1W)X4
TR419 2SC4278(E/F)
TR423 2SC1841(E/F)
R426 22K
R427 20K
R421 R422 20K
L401 1uH
RL482
R424 270K
R425 4.7
R431 4.7(1W)
C422 4.7/63
C431 0.1/250V
C421 4.7/63
D411 1SS252
TP-C
TR421
2SA1633(E/F)
C425 220P(500V)
TR443 DTC143ES
R442 1K
TR442 DTA143ES
R443 2.2K
R445 2.2K
R490 4.7K
C498 0.1Z
CN11A
REAR
GND
12V
GND
-12V
GND
DC
RELAY
BL
THERMAL
TO 1U-2866-1 REAR AMP UNIT
D905 1SS252
5V
R441
1SS252
PROTECTION
R.SP
D481 1SS252
RL481
R481 1(NB)
D482 1SS252
RL482
R482 1(NB)
TR484
TR488 DTC144ES
R489 47
R485 4.7
R499 4.7
TR486 2SC1740S(S)
C499 0.1Z
TR483 TR481 TR482
R496 4.7K
R497 4.7K
R498 4.7K
2SC1740S(E)
R491 1K
C481 47/16
TR485
TR487 2SA933S(S)
R492 10K
C482 330/6.3
R493 47K
R488 10K
R484 10K
R486 10K
SP-FRONT
C.SP
TR481–TR485 2SC1740S(S)
VDD
RESET
STOP
R494 47K
TR803 DTA143ES
5V
C806 220/6.3
C807 CK10000P
D804 1SS252
POWER-OFF
R808 220K
TR802 2SC1740S(S)
R810 10K
C805 CF0.12
R809 10K
R807 4.7K
C804 4.7/35
D802 1SS252
ZD801 MTZJ3.3A
C803 CK1000P
R806 4.7K
R805 1K
D803 1SS252
R803 1K
R804 1K
TR801 DTC143ES
R802 10K
C801 3300uF/6.3V
C802 0.1Z
D801 1SR35-200
IC551 NJM78M06FA(S)
+11.8V
C552 0.1Z
C551 10/16
R553 4.7K
TR551 2SC1740S(S)
R552 20K
R551 10K
ZD551 MTZJ6.8A
CN4A
6V
GND
Power_ON
B.DOWN
TO 1U-2866-2 POWER SUPPLY UNIT
-VKK
5V-S
+B LINE
-B LINE
SIGNAL LINE

	*1	*2	*3	*4
900	C435·436	C428	C351·352	R375
E3	-	-	8200uF/50V	1.1k
E2/EK/E1	100P	0.0047	8200uF/56V	1.2k

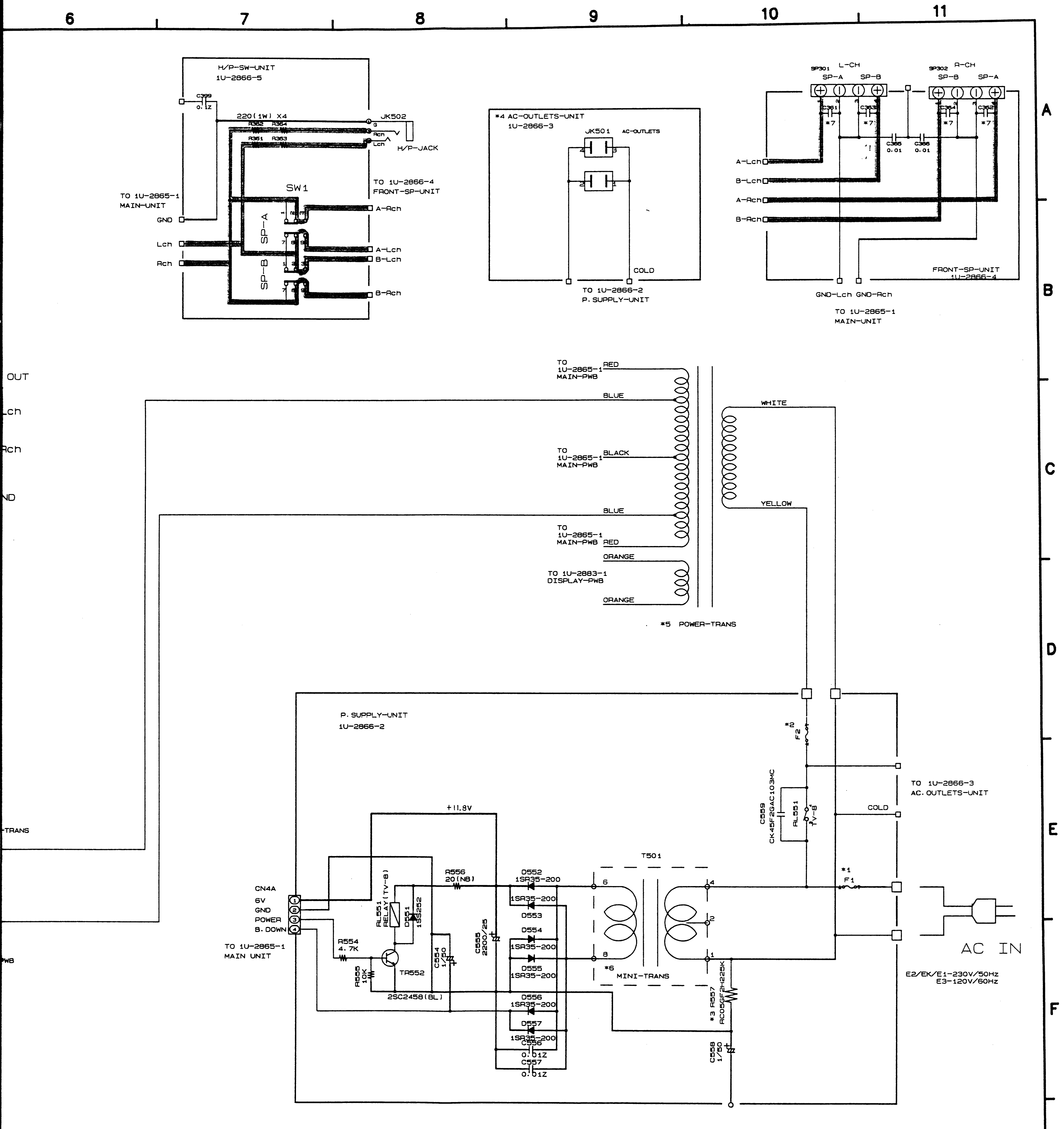
SCHEMATIC DIAGRAM

1 2 3 4 5 6


1U-2866-1
REAR AMP. UNIT
TR531
2SC1740S
R531
390K
C561
47/16
TH531
2790034067
R513
1 (NB)
D501
1SS252
RL501
DH24D2
CN11A
TERMAL
BL
RELAY
DC
GND
-12V
GND
12V
GND
Sch
TO 1U-2865-1
MAIN UNIT
J4
C503
2.2/50
*14
IC501
*9
C531
C501
CK100P
R501
22K
R503
1.6K
C505
47/16
R505
30K
C508
1/50
L501 INDUCTOR (1MH)
R507
4.7
C507
1/50
R509
4.7 (1W)
RL501
DH24D2
R511
20K
C511
CF0.1
C504
2.2/50
*14
IC502
*9
C532
C502
CK100P
R502
22K
R504
1.6K
C506
47/16
R506
30K
C528 1/50
L502 INDUCTOR (1MH)
R508
4.7
C527
1/50
R510
4.7 (1W)
RL501
DH24D2
R512
20K
C512
CF0.1
*12
C513
*12 C514
C526
0.01Z
SP OUT
SP501
SLch
SRch
S-GND
+12V
IC503
NJM7812FA(S)
OUT
IN
IC506
ICPN20T
C519
0.01Z
C521
10/16
C520
0.01Z
C522
10/16
-12V
OUT
IN
IC504
NJM7912FA
IC505
ICPN20T
+22.5V
*13
C517
*13
C518
-22.5V
D502
S4VB20
C523
C524
CF0.1 (250V)
C525
*11 J2
*10
F11
*11
J1
*10
F12
FROM
POWER-TRANS
BLUE
BLUE
FROM
MAIN-PWB
BLACK

	*9 C531 C532	*10 F11 F12	*11 J1 J2	*12 C513 C514	*13 C517 C518	*14 IC501 IC502
900 E3	–	5A /250V	–	–	3300uF/25V	SI-18751
900 E2/EK E1	CK100P	–	0	CQ4700P	3300uF/35V	SI-18752

DENON 278


6
7
8
9
10
11
A
B
C
D
E
F
H/P-SW-UNIT
1U-2866-5
C399
0.1Z
220(1W) X4
R362 R364
R361 R363
JK502
Rch
Lch
H/P-JACK
TO 1U-2866-4
FRONT-SP-UNIT
TO 1U-2865-1
MAIN-UNIT
GND
Lch
Rch
SW1
SP-A
SP-B
A-Rch
A-Lch
B-Lch
B-Rch
*4 AC-OUTLETS-UNIT
1U-2866-3
JK501
AC-OUTLETS
COLD
TO 1U-2866-2
P. SUPPLY-UNIT
SP301
L-CH
SP-A
SP-B
SP302
R-CH
C361
C363
C364
C362
*7
C365
0.01
C366
0.01
A-Lch
B-Lch
A-Rch
B-Rch
FRONT-SP-UNIT
1U-2866-4
GND-Lch GND-Rch
TO 1U-2865-1
MAIN-UNIT
OUT
Lch
Rch
ND
-TRANS
PWB
TO
1U-2865-1
MAIN-PWB
RED
BLUE
WHITE
BLACK
YELLOW
ORANGE
TO 1U-2883-1
DISPLAY-PWB
*5 POWER-TRANS
P. SUPPLY-UNIT
1U-2866-2
*2
F2
C559
CK45F2GAC103MC
RL551
TV-8
TO 1U-2866-3
AC. OUTLETS-UNIT
COLD
+11.8V
T501
*1
F1
CN4A
6V
GND
POWER
B. DOWN
TO 1U-2865-1
MAIN UNIT
RL551
RELAY(TV-8)
D551
1SS252
R556
20(NB)
D552
1SR35-200
D553
D554
D555
D556
D557
R554
4.7K
R555
10K
TR552
2SC2458(BL)
C554
1/50
C555
2200/25
C556
0.01Z
C557
0.01Z
*6
MINI-TRANS
*3 R557
RC05GF2H225K
C558
1/50
AC IN
E2/EK/E1-230V/50Hz
E3-120V/60Hz

	*1 F1	*2 F2	*3 R557	*4 AC OUTLETS	*5 POWER TRANS	*6 MINI-TRANS	*7 SW361-364
900 E3	8A /250V	6.3A /250V	2.2M	0	2336178004	2336073000	–
900 E2/EK E1	–	2.5A /250V	–	–	2336178002	2336085012	CQ6800P

━━━━━ +B LINE

— — — — −B LINE

▬▬▬▬▬ SIGNAL LINE

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